

American Bee Journal



Vol. 95 No. 4

APRIL

1955

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Extra queens, 80c each.

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QUEENS	ITALIANS		
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2-lb. pkg. w.q.	\$3.00	\$2.90	\$2.85
3-lb. pkg. w.q.	4.00	3.90	3.85
Nice lge. queens	.95	.90	.85

Send us your order of 1 or 1,000

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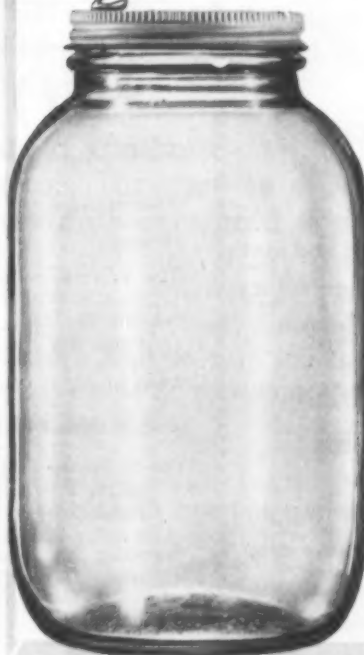
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**H-A Honey Jars
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Equal in quality to any that we know of, and guaranteed to produce in the top brackets. What you want when you want them.

	Queens	2-lb. pkg. w/q	3-lb. pkg. w/q
1-24	\$1.20	\$3.95	\$4.75
25-99	1.10	3.70	4.50
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"SUPERIOR" BEE COMB FOUNDATION

which is made from only the purest and best Western beeswax. We are also manufacturers of the INTERNATIONALLY known

"SUPERIOR" LIFETIME HONEY EXTRACTORS

Our new catalog, somewhat delayed by the printers, is now ready for you. Please drop us a card, if you have not received a copy. Better still—send a list of your needs, as we can give discounts on quantity orders.

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"The Best Is Always Superior"

THE AMERICAN BEE JOURNAL

HAMILTON, ILLINOIS

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100-499	1.05	3.20	4.00	4.80	5.60

Tested Queens — \$2.00 each

Queens Postpaid-Airmailed — Clipped — No Extra Cost

For Queenless Package Deduct Price of Queen
Packages F. O. B. Shipping Points

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Write for Our 1955 Price List

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Shipping weight 2 Lbs.

— and rarin' to go!

- No Sparks
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Bee Calm with Taylor's Hive Bomb

* Trademark, Stewart Taylor, Camargo, Illinois

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Choice

Honey Bees and Queens



**DADANT'S STAR-
LINE HYBRIDS** and
Wicht's Three-Band-
Italians.

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"Quality, Service and Satisfaction"

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queens. That's one way we try to
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both plain and wired.

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Write for Prices.

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Condensed to save you time.
Illustrated to give you pleasure.

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MODERN BEEKEEPING
The Picture Bee Magazine
Clarkson, Kentucky

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Simmesport, La.

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3-lb. pkg. with queen 3.50
4-lb. pkg. with queen 4.40

Queens — 90c each — Airmail

Satisfaction assured. Live delivery
guaranteed. We have only a limited
number of packages left.

PACKAGE BEES FOR 1955



**Dadant's Starline Hybrid Stock—38% Better
Honey Production** than the average common
stock of the country (3 years trial); 18% Bet-
ter Egg-laying Ability than the average com-
mon stock of the country (4 years of trial).
Results of other trials obtainable by mailing
us a postal card.

GARON'S OWN 3-Banded Italian Stock improved through
know-how in selecting Breeding Queens and Drone Mothers
for combinableness necessary for highest honey production.

	QUEENS		Package Bees and Queens		
	Italians	Starlines	2-lbs.	3-lbs.	4-lbs.
1-24	\$1.15	\$1.50	\$3.40	\$4.35	\$5.30
25-99	1.10	1.40	3.30	4.25	5.20
100-up	1.05	1.30	3.20	4.15	5.10

When Dadant Starline 4-Way Hybrid Queens are wanted with
packages, add 25c extra per package.

Queens clipped and marked when desired, and Air Mailed at no extra cost.

GARON BEE CO.

Donaldsonville, La.

The dance-language, senses, and life of the bee —

THE DANCING BEES

By Karl von Frisch



The world's foremost authority on the honeybee tells of his
"amazing experiments"* with bees to discover how they com-
municate. Here in all their marvelous variations are descrip-
tions of the dance-language of the bees, dances which tell in
detail the location and quantity and quality of food. The auth-
or's ingenuity, his astonishing facts about insect communities,
his joy in nature, the charm of his writing make this a rare
and fascinating adventure into science. *Illustrated.*

*Scientific American

\$4.00 at all booksellers

HARCOURT, BRACE AND COMPANY

Quality Light Italian Queens, Each 85c

2-lb. Package Bees with Queen \$2.75 exp.
3-lb. Package Bees with Queen 3.50
Additional lb. 75c

Delivered on quantity orders, 1200 miles or less at small additional charges.

B. A. ANDERSON CO.

Opp, Ala.

YELLOW ITALIAN BEES AND QUEENS

As good as the best and are the gentlest of all. Priced so anyone can afford them.
2-lb. pkg. w/1955 queen, \$2.50; 3-lb. pkg. w/1955 queen, \$3.50; 4-lb. pkg. w/1955
queen, \$4.30; Queens, airmail, 85c ea. Health certificate, live arrival guaranteed.

OSCAR ARNOUVILLE

Box 203, Hamburg, La.

Use ABJ Labels — They Get Results

PACKAGE BEES

Reports indicate little honey will be carried over into another season, and prices have advanced.

**Now Is the Time.
Fill Every Hive in '55.**

**Order early for shipping dates
of your choice.**

**We feed FUMIDIL-B at no extra cost
to you.**

	1 to 25	26 or more
2-lb. pkg. with regular queen	\$3.40 ea.	3.15 each
3-lb. pkg. with regular queen	4.40 ea.	4.15 each

For Island Hybrid Queen add 25c per package

"They Produce"

ROSSMAN APIARIES

P. O. Box 133

Moultrie, Ga.

Since the year- 1896

**We have been manufacturing
supplies for beekeepers who
have become satisfied customers.
Many families have been pur-
chasing their HONEY SECTIONS,
HIVE BODIES and FRAMES, as
well as other supplies from us
for the past 58 years.**

All you have to do to become a satisfied customer is to make use of our 1955 catalog which will be available to you about February 1.

If you are not on our mailing list, write for a catalog.

MARSHFIELD MFG. CO.

Wholesale

Retail

MARSHFIELD, WISCONSIN

Comments

CALIFORNIA—More about that small beekeeper (see last month). Without the host of small beekeepers, could a bee supply house, so necessary to the industry, stay in business? Could a bee magazine continue without them? Who would there be to advertise without them? Who gives the housewife the honey habit by direct appeal, to her and to the children? I recently learned of a disabled veteran who has acquired a few colonies of bees. He packs his honey in nice, small sized jars his wife saves, puts on an attractive label and his local grocery sells them out at a fast clip. But soon he was condemned for not following standard rules of packaging and was told to stop. But he aroused so much sentiment that he was soon back in business selling the old fashioned way. He will soon have a lot of customer friends and let's not stop him.—Troy H. Nance, Sacramento.

TEXAS—When I retired from active duty in the Army, my hobbies became fishing, golf, and bees. I have made some costly mistakes with bees. My advice to beginners is to get a book about bees, buy standard hives and supplies from your dealers. Don't do too much experimenting.—Capt. W. E. Crampton, Sulphur Springs.

INDIANA—I think the only way to dignify beekeeping is to lift it from the "glorified hobby" class and the best approach to this is research, either by the schools, the associations, or even by the beekeepers. We should find new uses for honey, new ways to process it. Can't something be added to honey to sublimate its cloying taste? Jams and jellies have enough acid to accomplish this. Analyses of the health values of honey are not enough. People are not sufficiently impressed. Honey must be made an every day sweet not an expensive luxury.—Jack Long, Monroeville.

NEW JERSEY—Three years ago I had two colonies in 11 frame, Hoffman size, double brood chambers and when I added the 32, 4 x 5 section supers to these boiling over colonies they really went to work. When late summer came I had four full supers of nicely finished sections of very light and most delicious honey. So good on pancakes and onions. The supers with sections not finished I used next season for starters. When the bees went into winter they had the upper story solid with honey which kept them from joining the bread line during the long, cold winter days.—Dudley F. Burnett, Boonton.

CALIFORNIA—Most of your readers will remember my story about the bee beard we put on over a nationwide television network, on Art Baker's "You Asked for It." The television staff said they had over 500 letters requesting a repeat performance. The program has an audience of twenty million, so maybe some folks were interested in buying some honey.—George S. Biggers, Ojai.

Always Best

Ahead of the Rest

BERRY'S "OLD RELIABLE" STRAIN OF ITALIAN BEES

Definitely, the **PREFERRED** stock of **MAJOR SUCCESSFUL HONEY PRODUCERS** the **WORLD** over. **INSURE** your crop with young, vigorous, producing, **DEPENDABLE BERRY BEES**. Sixty years of **SELECT** breeding.

PRICES APRIL 1st THROUGH MAY 10th

Package Bees With Queens and Individual Queens

	Queens	2-lb. Pkg.	3-lb. Pkg.	4-lb. Pkg.	5-lb. Pkg.
1-24	\$1.15	\$3.50	\$4.50	\$5.50	\$6.50
25-99	1.10	3.40	4.40	5.40	6.40
100-499	1.05	3.30	4.30	5.30	6.30
500-Up	1.00	3.25	4.25	5.25	6.25

For prices on queenless packages deduct price of queen.

M. C. BERRY & SON

Montgomery, Ala.

P. O. Box 684

— Standard of the Beekeeping Profession —



Sue Bee Says:

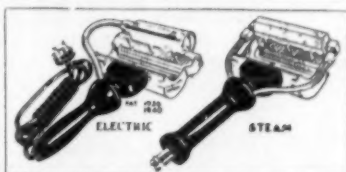
Now is the time to have your Fumidil-B, Soy Flour, Brewers' Yeast, Terramycin and Sulfa on hand.

We are in constant market for beeswax and honey. Write us for shipping tags.

If you have equipment or bees for sale, contact us. We have buyers.

SIoux HONEY ASSOCIATION

Rogers, Texas; Anaheim, Calif.; Lima, Ohio; Tacoma, Wash.; Sioux City, Iowa



We are again able to offer the Rosedale Steam and Electric Uncap-
ing Planes to the American Beekeepers. Write for Free Circular.

Price delivered, Electric Plane—\$13.00, Steam Plane—\$8.00

Satisfaction guaranteed. Full line of repairs on hand.

Write for Free circular of the Two-Queen Convertible Hive.

JOHN J. MAENDEL

Forest River Colony

Fordville, N. Dakota

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A special, light colored foundation, somewhat heavier than thin super, but lower in price. White, beautiful comb honey packed in glass and surrounded with a fine grade of liquid honey is a package that customers just want to buy.

DADANT & SONS, Inc.

Hamilton, Illinois

Leahys

give you:-

- Good Quality
- Prompt Shipment
- Low Prices
- Satisfaction Guaranteed

Write for our Free 1955 Catalogue.

Leahy Manufacturing Co.

Box 3269

Higginville, Mo.

DRUGS for the Control of Bee Diseases

SULFATHIAZOLE—For American Foulbrood. In use for many years with good results. Standard preventive dose, $\frac{1}{4}$ tsp. in a ten-pound pail of sirup. Inexpensive.

2 ounces — 75 feedings	\$.96
8 ounces — 300 feedings	3.20
1 pound — 600 feedings	5.90
10 pounds—6000 feedings	42.75 Net, no discount

TERRAMYCIN TAF 25—For the prevention or treatment of European Foulbrood. TAF 25 is entirely soluble, economical. In sirup feed, one gram ($\frac{1}{4}$ tsp.) to each feeding. For dry use, add powdered sugar to a $\frac{1}{4}$ tsp. to make a full teaspoonful. Mix thoroughly and dust on tops of brood frames. If disease is present use $\frac{1}{2}$ tsp. of drug. Three treatments for either prevention or cure are usually enough. About $2\frac{1}{2}$ ¢ per dose for prevention.

4-oz. bottle, 58 feedings, \$3.90; 1-lb. bottle, 460 feedings, \$11.90; 10 lbs., 4600 feedings, \$73.00 Net, no discount

FUMIDIL-B—For Nosema. This serious disease of adult bees is often unnoticed. In packages may cause loss from supersedure that is serious. Likely cause of common spring dwindling. Colonies fed in fall or spring often make more honey. Packages do well without queen replacement and with little attention. Full directions for use on each bottle.

$\frac{1}{2}$ gram, 5 or 6 feedings, \$2.40; $9\frac{1}{2}$ grams, 100 to 120 feedings, \$28.50; 57 grams, 600 to 700 feedings, \$127.50 Net, no discount

DADANT & SONS, Inc.

Hamilton, Illinois

Lewis-Dadant Branches—Colonie and Montgomery Sts., Albany 1, N. Y.; Stephenson Ave. at 14th St., Lynchburg, Va.; 92 Riverside St., Chillicothe, Ohio; 1010 W. Austin St., Paris, Texas; Rt. 41, S., Kahira, Ga.

Dealers Everywhere

Abroad

England

Beekeeper's News . . .

The Beekeeper's News published in Sonning, Reading, Berks, is a 20 page monthly mimeographed news-ful booklet. It contains dates of shows and displays, dances, field-trips and other get togethers in beekeeping. There is a resume of all or nearly all English language bee magazines.

It is they who wonder what kind of hair the prominent actress has when the news gives her "honey tresses." They also recommend Old Dutch Cleanser sprinkled around the hive to get rid of ants. They also suggest a mole repellent. Get the boy's favorite pin wheel, insert the stick deep in the mole tunnel. When the wind blows, the vibration scares the mole out.

France

Book on Royal Jelly . . .

Raymond Dubois, apparently in answer to a demand for an explanation of the structure of royal jelly and its possible application to human needs, has written a 100-page book "Le Miracle de la Gelee Royale" (The Miracle of Royal Jelly).

Mr. Dubois paints a fair picture of the value of royal jelly in the production of the honey-bee queen, as well as in the first two days, food of the worker larvae, and in the food for the queen bee as she proceeds in her activity, laying sometimes more than her own weight in eggs in a single day.

He then discusses the composition of royal jelly, its richness in vitamins, hormones, biotin, and other elements of value in modern therapeutics, as well as some of the claims made for it in actual use by man.

According to its author, the book has had a distribution of 15,000 and is soon to appear in Egyptian. To those interested, a copy of the book (in French) may be obtained by sending \$1.00 to the author at Saint-Martial-de-Gimel, (Coreze), France.

Switzerland

Queen Mating . . .

According to article by Dr. M. Hunkeler in a Swiss bee paper, translated by Dr. H. M. Fraser, in 1954 there were 160 mating stations in Switzerland with a total of some 1,062 beekeeper breeders who raised some 9,297 mated queens. The small mating boxes are well insulated for warmth and provisioned with 200 grams of bees and a pound of "honey paste" (one part honey, three parts powdered sugar). Some few stations had to be discontinued on account of acarine disease.

Spain

Spanish Apicultural Proverbs . . .

A 150 page paper bound book has just reached us from Spain, published by J. P. Fabregas in Barcelona. It is titled "Refranero Apicola" (Apicultural Proverbs). Arranged alphabetically, hundred of proverbs are given. Their translation does not enhance their fascination, since the meter of the proverb is often lost. For instance "Abejas sin regina, la colmena ruina" (Bees without a queen, colony ruined). We assume the price of the book to be about \$2.00.

YORK'S PACKAGE BEES AND QUEENS

The Preference of Leading Honey Producers

Your choice of two outstanding strains, Dadant's new improved Starlines or our own strain of Italians.
Good Bees and Good People to Deal with.

Fumagillin fed bees and queens as a special service without extra charge.

— Prices with Italian Queens —



Reg. U.S.
Pat. Off.

QUANTITY	1-24	25-99	100 up
2-lb. Pkg.	\$3.75	\$3.50	\$3.25
3-lb. Pkg.	4.75	4.50	4.25
4-lb. Pkg.	5.75	5.50	5.25
5-lb. Pkg.	6.75	6.50	6.25
Queens	1.25	1.15	1.05



Reg. U.S.
Pat. Off.

Above prices are for/or with our regular line Italians. For DADANT'S NEW IMPROVED STARLINES add 25c each additional. For TESTED QUEENS add \$1.00 each additional. For QUEENLESS PACKAGES deduct \$1.00 per package.

SPECIAL INTRODUCTORY OFFER: If you wish to try Starline Hybrids, mention this, and on orders for regular Italian stock we will substitute 10 Starline queens or 10% of your order, whichever is smaller, at regular stock prices.

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How to Produce Bulk Comb Honey

by Carl Kalthoff

IN THE production of bulk comb honey, what has the greatest bearing on securing a product of the finest quality? In our own operation, we consider the rearing of our own queens suited to the job and our system of management developed over the years of main importance. We should add too that in running our 300 colonies for bulk comb honey production, we use the single story 10-frame brood chamber the year round.

We rear our queens by the Miller system. The previous year a 10-frame hive body is supplied with ten frames containing full sheets of unwired brood foundation. We remove all the supers from a strong colony, and put this prepared body on top, thus forcing the bees to draw the foundation quickly to avoid sagging. Later this body is removed, the honey extracted, the combs cleaned by the bees and stored to be used the following year as breeder comb.

Each year a selected breeder queen and her colony is brought into the home yard from one of the outyards. If possible, we try to get a queen from a different yard each year.

The best time to rear our new queens is during the clover honey-

flow. But we should explain that our main flow each year comes in early August, and using the clover flow for queen rearing gives us queens for use later. If there is no flow on, we feed the breeder hive honey diluted with water, giving fresh feed each day.

When conditions are right for raising the queens, a comb is removed from the breeder hive and one of the "breeder" combs produced the year before is placed between two combs of unsealed brood. The remainder of the brood chamber should be well filled with brood. When the "breeder" comb is fairly well filled with eggs it is removed and another empty "breeder" comb is placed between two combs of unsealed brood in the breeder colony, continuing the procedure until enough cells have been produced.

Each "breeder" comb with eggs is cut in half lengthwise, the lower half removed, and the upper half cut along the lower edge in saw-tooth pattern from end bar to end bar, following the plan devised by Dr. Miller. On and around the tips of the saw-teeth the queen cells will be built.

A cell-builder colony is selected

that has a two-year-old queen and a lot of brood and bees. The queen of the colony is killed, the supers are removed and the bees are shaken off their combs, the supers then being placed on storing colonies. A comb is removed from the cell builder and the prepared comb from the breeder hive is slipped between two combs of unsealed brood. For each succeeding comb of eggs a new cell-builder colony is used. These cell-building colonies are fed, honeyflow or no honeyflow. The bees concentrate on building queen cells on the prepared combs and very few cells, if any, are built on the other combs.

In ten days, the combs of queen cells are removed, leaving one or two cells with the cell-builder. Any cells built on the other combs of the cell builder are destroyed. The cells are cut off and placed in two-comb nucs (or in full colonies that may need requeening, the queens having been killed 7 or 8 days previously and queen cells built in the interval now destroyed).

After the new queens have started to lay in the nucs they may be used for requeening.



Home yard, August 1953, taken in blue vine flow.



Form for putting bulk comb foundation in the shallow super frames.

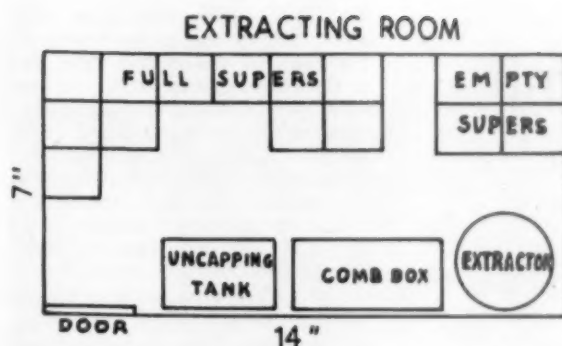


Diagram of Kaithoff's extracting room.

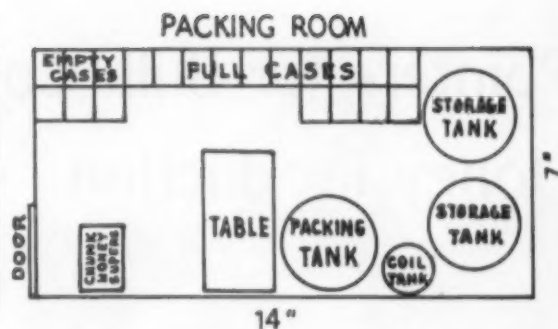


Diagram of packing room with arrangement for storage tanks, packing table and packing cases.

In addition to the plan we have just described, we also get some queens by dividing colonies in early April. These should be colonies with about eight full combs of brood and preferably two-year-old queens because they build better cells.

For each colony to be divided, we need a hive body with eight empty brood combs, one comb of honey, and a division board feeder. One of these prepared bodies is set next to the colony to be divided. Remove three of the empty combs and place the comb of honey next to one of the inside walls. From the colony to be divided, remove three combs of emerging brood and the queen and place these next to the comb of honey in the prepared body, followed by one empty comb, then the feeder, and finally the remaining four combs.

The seven combs left in the colony being divided are all moved to one side and the space left vacant is filled with the three empty combs first removed from the prepared body. If the bees need feed, substitute a comb of honey for one of the empty combs. Now replace the inner cover, put a queen excluder on the inner cover, and place the new division on the excluder (the hole in the inner cover is left open).

Ten days later remove the upper body, provide it with top and bottom, and place it in a new location in the yard or move it to an outyard, with entrance plugged tightly with grass so it will be several days before the bees will be able to get out. Refill the feeder and give another comb of honey if it is needed.

The colony left on the old stand, being without a queen, should produce some nice queen cells to be used for requeening other colonies or to place in nucs, leaving a cell or two with the colony from which the division was originally made.

When the new queens have started to lay, combs of emerging brood are added from colonies that can spare them. By this plan we get new colonies to replace any that have been united with others and we get young queens. We are continually uniting colonies that do not come up to par early in the season.

Colonies with young queens seldom try to swarm, but, when our swarming season comes, before the clover flow is on, any colonies that do make preparations for swarming, even during the flow, are Demareed, and any bulk supers on them are removed and given to the better storers. The "swarming" colonies, from then on, are only given deep bodies of combs, that later will be our reserve supply to use as feed the following spring.

During spring inspection, colonies that need room to accommodate young bees and incoming spring nectar are given shallow extracting supers, above excluders.

We do little spring feeding since brood chambers are full of honey from the previous fall. Should any colonies actually need feed in spring, it is always done with combs of honey. We do not feed pollen substitute or supplement because in our locality it is not necessary. If we find any AFB we do feed sulfa in sirup except in cases too far along. Then we gas the colonies and destroy the combs. With constant requeening we have very little EFB, perhaps three to six cases a year and requeening seems to remedy that. As far as we know we never have had Nosema.

When flow time comes, all colonies are reduced to a single shallow extracting super, with a bulk comb honey super between the shallow and the brood nest. These bulk honey supers have eight frames of foundation with a light colored extracting

comb at each side. This way the foundation will be built out and capped rapidly. As soon as the combs in the supers are fully capped, the supers are removed to prevent travel stains and they are stored in a mouseproof and flyproof room.

We try to get a bulk comb honey super on each hive during the first two days of the honeyflow, as the flow is heaviest during its early period and then the secretion of wax is also at its best. We have had flows lasting only five days; others as long as three weeks. As soon as the flow tapers off, the supers are concentrated on the heavier producers, and shallow extracting supers supplied to the rest.

The bulk comb honey supers are prepared for use only when they are needed. We have two forms (see picture) each with room for five frames, but we use only four on each as that gives us enough frames to fill one super. By using the two forms in alternation, the melted wax we pour along the top edges of the sheets of bulk comb honey foundation where they join the frames, has a chance to cool on one form while we insert the foundation and pour the wax on the other form.

Finally, let us say that to secure a quality honey, your locality should assure a honeyflow at some time during the producing season. You should also have as many of the colonies as possible in each yard strong enough by flow time so they are ready for the bulk comb honey supers. The brood chambers should be full of brood, even to the outside combs, so all the honey goes into the supers where we want it to be. Let us add, also, that anyone contemplating the production of this kind of honey should study that gem of beekeeping literature, "Honey Getting," by the late E. L. Sechrist.

Pointers for Bulk Comb Honey Production

by L. F. Childers

PRODUCERS of bulk comb honey have some humps to surmount if they are to achieve success. They must have bees by the bushel in the hives at the right time. Getting these bees is a job. The queen is the source of the bees and the old-time section honey producers were first to see the virtue of requeening the preceding August or September in order to have young virulent queens, not so likely to swarm, to head the colonies in the season to come. They advocated abundant winter stores and shied away from spring stimulative feed because it induced swarming.

All of this is sound, but we young "fellers" are a bit careless. Many of us don't requeen in the fall and we take away too much of the winter stores, so we have starvation and uneven strength so good bulk comb honey production is not possible. To remedy this we do feed to insure stores and stimulate brood and we divide (or use packages) to boost final numbers.

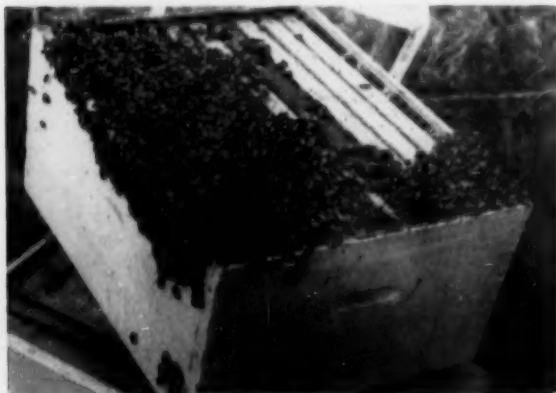
Stimulative feeding should start about two months before the beginning of the main flow. Begin with pollen substitute, fortified with sulfa and Fumidil and with terramycin if

you have trouble with European; then, as the weather warms, use sirup also. For sirup feeding I use Boardman entrance feeders and feed clear up to the flow if necessary. When all colonies are thus fed the best queens will forge ahead and be at swarming strength before the flow while others will string along behind, showing some to be worthless. Dr. C. C. Miller, the dean of section honey producers, says to break up all weak colonies and distribute their bees and brood to the strongest, making the strong stronger. Now if we did just that after our period of stimulative feeding we would run smack into a siege of wasteful swarming. To get the bees and avoid swarming we take a course which was not in existence in the Doctor's day. We even up the strength of our colonies by a system of using packages or making divides of the colonies we have stimulated.

To do this we hive our packages or make the divides about four weeks, not less, before the flow should begin. To make the divide we take to the colony a super of drawn combs and an excluder. We lift out of the now parent colony two or three frames of brood and

bees, put empty frames in their place, lay on the excluder and set the divide on top of that. The idea of the excluder is to let the old bees lifted out go down, and nurse bees come up to the young brood. This operation should be done about two or three days before the queen is to be installed. In that interim the bees in the divide will become aware they are queenless. When the queen arrives, slip out the excluder and put in its place the dividing screen (see picture) and cover the opening with a heavy cloth in order to completely break contact with the bees below. There is less gamble in having fine queens balled by this method. After the queen has been accepted and laying well, the cloth should be taken away so the bees will become reconciled to each other. There will be less confusion when the divide is finally put down if the entrance of this screen is put forward.

We have now made the divide, and will now arrange to feed it. A frame of pollen and honey lifted with the bees and brood helps, but if we don't have it or even if we do we feed pollen substitute and sirup and are not stingy with it. To feed sirup easily I take a thin three-ply board, like an inner cover, cover it with one-ply roofing and nail two blocks about five inches square along the center over the brood just installed, then with an extension bit bore a hole the size of the feeder jar. This block will turn the rain and we will always know how the divide is coming on. One of these holes is used for sirup and another for water. It takes a lot of water to rear brood and there aren't many nurse bees in the brood just lifted.



This is a good nuc. Note the empty super below, and the dividing screen. The queen is a four-way hybrid.



Note the feeder cans on the old colonies and the feeder cans on top of the nucs.



Also a good nuc, with a four-way queen. Note the top feeder.



Dividing screen, exit under left hand (right hand corner shows a knot, not a hole). This screen is actually too large (should also be covered with a cloth). Note the landing board and entrance feeder.

From now on we watch the development of the yard. Some brood from those which are about to swarm can be and should be taken to help the needy. But Dr. Miller's dictum of strong colonies still holds. The next move comes with the advent of the main flow, and it is of supreme importance. Connecticut's C. H. Pease, an experienced section honey producer, said when the nectar freely shakes from the combs set the parent colony back off its stand and put the new one in its place with the queen and one frame of brood then fill in with foundation. To most of us that sounds severe. We have spent two months rearing that brood and now dispose of it? Then we listen to the voice of that veteran sage E. S. Miller of Indiana saying that it is folly to feed so much honey into the brood of a virulent queen only to find a lot of bees in the hive at the end of the flow and no honey in the supers.

So, then we get down on our knees to find the queen, and most of us would want to fudge on Mr. Pease and put in some more brood. But

what kind of brood should we put in? If it was sealed brood, that would soon emerge and fill the brood chamber with a lot of young jobless bees to be in the way and tend to induce swarming. If we put in eggs and larvae they too would soon all have to be fed, consuming a lot of honey that would violate Mr. Miller's dictum.

Also, while we are at it, we suddenly become aware of dozens and dozens of pollen laden bees surrounding us while we work. They are impatient, frantic to get into the hive to feed the very brood we are now taking away. What will they do with that pollen with no brood to feed? They will surely peddle it all over the bulk comb we hope to get. But Forrest Earls comes to our rescue with a suggestion that we put an excluder and a super of drawn combs immediately over the brood nest to catch that pollen. Do not permit the bees to have a top entrance. They just pack all the comb with so much pollen that it is useless for the purpose intended. We are now ready to pile on the supers for chunk comb, and when I do that I

can almost feel the presence of Carl Killion looking over my shoulders and saying, "Haven't I told you time and again never to put on an excess of supers when making comb honey. Your bees will spread it all around. What you want is finely finished compact comb and to get that you must squeeze them." So we squeeze 'em by putting on just one super and no more until this one shows evidence of being finished.

The brood and bees from the parent colony which we have set back are left in place for about one week before moving to a new stand. There are some bees in it that fly and more that soon will. These bees will be of material value to our new colony and we want them to get oriented to the old stand and not to the new. This old queen is now really out of business for this flow, but she will be in fine condition for the fall flow. Our new queen can never do her best penned under that excluder. Chances are that her bees will surround her with so much pollen she will scarcely find room to lay, and she will have to be reinforced and likely fed to get through the winter.

What about Pollen Substitutes?

In "Gleanings" for February, page 76, Howard Pike says that a pound of pollen will rear 4500 bees. Quite likely. It follows then that a large amount of pollen is needed in spring to feed out the bees that will later make the crop. Pike says it takes 40-50 pounds of pollen a year for the average colony. He advises increasing the value of the pollen by supplementing it with three times its weight of expeller processed soybean flour (fat free). So a pound of pollen plus three pounds of the flour will raise 30,000 bees.

So far so good. However, there are variants in the picture. In locations where there are many trees and rolling topography, with rivers and streams, bees seldom use either substitutes or supplements to advantage if the amount of pollen stored the fall before is adequate for late winter and early brood rearing. Also, when bees do use these additives they often waste them. They are of best advantage only when there is some stored pollen and where the bees are in a prairie region where there is only a scant supply of early pollen sources. In such locations, with some pollen reserves in the hive, the additives do help in boosting brood rearing and thus securing early bees.

In an attempt to get bees to rear brood real early (early March) when a pollen substitute was used, although the bees worked on it and even stored it, no eggs appeared until pollen was also available from spring bloom; or where there was some stored pollen in the combs. However, when a supplement was used, made from pollen melted out of storage combs and mixed with the flour and sirup, eggs appeared at once; or where combs of pollen were added from bodies stored over winter. Poor results are obtained without this understanding of the conditions under which the supplement or substitute is acceptable to the bees.

It was also found that in making cakes of these additives, they must be almost runny soft if they are to be used before the material becomes mouldy.

How to Feed Dry Sugar

by G. H. Cale

WHO started the feeding of dry sugar? Probably no one knows with certainty. It has been mentioned, off and on, for a long time but the use of dry sugar as a regular and not an emergency way to feed is fairly recent. I remember the first time we used it in an emergency. We couldn't get in to where the bees were located, with honey combs or with sirup, but we could walk in with a sack of sugar. The bees seemed to do as well with the sugar as they would have done with sirup.

Cautiously we extended its use until now we prefer the dry sugar. Sometimes cane or beet sugar may be bought at a low price because it is soiled or hardened or because it is scrapings or it has been damaged somehow. Once we bought some with an admixture of powdered sugar and tried to make sirup of it, only to end up with some nice sweet jelly. Damaged sugar is suitable if it contains nothing in it offensive to the bees and does not have too much foreign matter which is entirely valueless.

Dry sugar is less expensive to use than sugar sirup since it requires no mixing, no containers, no container filling, is less in bulk and less wasteful. Sirup often escapes from containers faster than the bees require it because of leaks or pressure differences. The dry sugar also conserves what natural stores the bees may have since, when they are using the sugar, they use less of the hive stores.

In real early spring, if bees need feeding, and, due to cold, they cannot readily get to the sugar, it is best to use one ten pound pail of two to one sirup, with a single ten penny nail hole in the center of the can lid, with the dry sugar heaped near the pail. A single batch of this double feed will last even strong colonies at least two weeks and more if they have some stores in the hive.

One nice thing about dry sugar is that, no matter how much you give a

colony, if conditions are such that the bees do not use all the sugar it can be finally removed and stored for future use, so there is no waste. Also, unlike feeding honey or sirup, bees seldom rob on the sugar and it creates no excitement.

We have canvas cloths on top of the frames. By turning back a corner, the sugar can be piled on the cloth near that opening. A wooden rim inside the hive cover gives enough space so the bees can get to the sugar readily. With inner covers, the center hole is opened and the sugar piled around the opening. When sirup is also used, of course, there must be room provided for the sirup can by using an empty rim or empty super or hive body.

We have cured light cases of AFB by using dry sulfa in the sugar so we know that both sulfa and terramycin can be mixed with the sugar as a disease preventive.

The sugar is carried to the yards in the original sacks and there dug out into pails to carry to the hives. The amount used is indefinite; three or four pounds at a time. The sugar remains with the colonies until flow time and is then gathered up and stored. Sugar is easy to carry to the yards. It will transport in the family car or a light truck since it is not bulky like sirup in cans. It is not sloppy and it is an all around labor saver.

There is some evidence that if some sugar is left above a colony in winter where the bees can get at it, the bees use less of the honey stores and so reduce the attention in spring to check on feeding requirements. This means that the natural stores last longer. Seldom do we find a year when feeding is not necessary especially during late May. Sometimes colonies are real heavy in fall with stores. But somehow the bees consume it all and must be carried to the flow on feed. Sugar is then a great help in time of need.

The Influence of the Honey Bee and Its Products on the Customs and Ceremonials of Man

by F. B. Paddock

Floyd B. Paddock is now Extension Apiarist of the Extension Service, Iowa State College of Agriculture, at Ames. He is in charge of the bee disease control program for the state where, for a long time, disease control has been based on education rather than regulation. It is likely that the results in Iowa with this approach have been equal to those of any other state. Paddock's forward thinking has been prominent in many ways. Perhaps his greatest effort has been for the grass roots beekeeper through the extension program of education, supported by demonstration apiaries in different parts of the state; a radio educational program, a quarterly publication for beekeepers and an annual report.

Paddock received his education from Colorado A & M College, Ohio State University, and the University of Wisconsin. He served as an instructor in entomology at the Texas A & M College, then as Associate Professor; as Entomologist for the Texas Experiment Station; Associate Professor of Entomology at Iowa State College; then Professor of Apiculture. He is also a beekeeper on a commercial basis and knows our problems. His interest in the humanities led to a study of bees and human relations and this is the fruit of his studies given to us here for the first time.

•

This picture of a little girl sampling the delicacy of new comb honey symbolizes the closeness between the honey bee and the high place its product has in the appreciation of people, a closeness that threads through all the history of mankind.



"**E**ITHER we must find some purpose for human life in Nature's plan not contemplated for the bees, or else conceive of man as a cruel mistake, an ironical unfinished experiment, abandoned by nature while working out the perfect life of the bee," said Sharp. You may be a piece of waste on the pile of human refuse. But probably you would prefer to be considered as being sacrificed for the sake of nature's development of something which is going to be more perfect for the human in the ages ahead.

Time is relative, after all, and our most common mistake is to measure time in periods of our own experience. It is difficult, indeed, for us to conceive the full meaning of a million years, so we simply have to use the figures and let them fall where they may. Yet it is estimated that the honey bee in its present form has probably existed for the last two million years. And right off we can ask the question, "Why has the honey bee existed in its present state for that period of time? Where did it come from in the years ahead of that? How long was it reaching the present condition?"

Pollination

This is a good place to let our friends know that bees were not developed primarily for the pleasure and perhaps profit of the beekeeper.

Sharp says, "Beekeeping is more a state of mind than a course of action. It constantly upsets one's settled order, makes for experiment, and compels speculation. Life so complex, so artificial, as this highly organized society of bees, has been an evolution, slow and difficult to trace, showing atrophy and obsolescence, the very swarm, it may be, the spent effect of some powerful primal cause, time, the transformer,

having stepped-up or down the voltages of life's currents whose sources lie hidden back among the timeless hills."

We must recognize that nature acts, as Sharp further says, "Nature, forever trying to finish what she has started, forever approaching her unattainable plan, catches at every hope—at all economies, all securities, all suggestions in the nest of *Bombus*, and endlessly applying them, produces after immemorial years the city of *Mellifica*, the dream of her heart, builded, or nearly builded, into the actual hive."

The entomologist can readily trace the evolution which was nature's work to develop the answer to her problem. Plants and flowers had been developed to a very high degree, so high in fact, it was advisable to turn to the transfer of pollen from one flower to another. This is accomplished in three general ways of wind, water, and agencies such as insects. Among the insects we can identify several species which do effect cross pollination. All of them are very efficient in certain respects but do not fully meet the demands of nature as a pollinating agent. We have been told in recent years of the work of the solitary bee, of the alkali bee. We have known of the wonders of the bumblebee as a pollinating agent. But it remained for the honey bee to most fully comply with the needs of nature for cross-pollination. The answer probably is that the honey-bee population is a deciding factor since only in the honey bee do we have a considerable population living over the winter with which to start the colony resources the following year. We also know that the honey bee has a more widespread distribution than any of

the other species of pollinating agents. And, lastly, it is possible, through the added efforts of man, to intensify the population of the honey bee for pollination purposes where and when needed. Furthermore, if the honey bee were not meeting the demand as completely as it is, we would have seen some type of development or improvement during its existence of the last two million years. We can rightfully assume then that the bee is satisfying the requirements of nature adequately as a pollinating agent.

Bee Husbandry

It must not be assumed that the bees were developed for the purpose of husbandry by man. That has been a fairly recent development. We must recognize that man's development is geologically very recent and certainly his husbandry efforts are even more recent. It is easy to picture how accidental was the discovery by man that the material we call honey, developed by the bee for its own purpose, is indeed a fine item of food for human consumption. We must recognize that the honey bee in its pollination efforts is 100 per cent dependent upon the products of the flowers, pollen, and nectar for its existence. It probably has been only within the last 20,000 years that man has practiced anything comparable to the present day husbandry of bees for the purpose of obtaining honey as an item of food.

So it is necessary to look at this whole matter from the standpoint of nature without introducing the item of human emotions, which are exceedingly variable and fragile, to say the least. We must consider the honey bee as being developed by nature to solve one of the problems which had developed. We must real-



Encyclopaedia Britannica did a good job showing a bee, not only gathering apple pollen, but also filling up with nectar. So later someone will bite into a juicy apple, perhaps without remembering the part the honey bee played in this drama of nature.



Also, Ben Knutson's famous picture of this pollen-loaded bee in flight emphasizes how nature has made this protein food so needful to the economy of the hive that producing food for man is a must for the honey bee.



Now commercial beekeeping goes round the world. This Australian apiary at Hawkesbury is little different from the others. It is a standardized occupation.



In Argentina, Louis Jensen is one of the largest commercial beekeepers. Without this identification it might just as well be here.



Here we are in western Canada. Don't know whose yard. A big one and a nice one. Might just as well be in the States.



Elias Hernandez, in Rio Piedras, Puerto Rico, does have to keep the hives off the ground. Otherwise this yard is about like all the others.

ize the association of man with the honey bee as accidental in the beginning. Then it becomes very interesting indeed to review the association of the honey bee with man through his period of development. It is hard to realize how widespread and deep seated has been this influence of the honey bee on the human.

Government

Law and order has always been necessary. The degree to which it has prevailed is the measure of failure or success in any society, plant or animal, and especially that segment with which the human is concerned. It is interesting to attempt to visualize conditions 20,000 years ago. Our fancy can depict the family as the basis of society with the head of the family as the respected authority. In time, these families overlapped and perhaps integrated into what could have been called clans or tribes. As this expansion continued and prospered, we can again see an overlapping of interests

or a conflict of interest. So there is constantly present a need for some authority to direct and control the energy and ambition of individuals as they are called society. We can extend this even further and realize that it constantly becomes more complex and complicated. There came a time when it was necessary to constitute authority over still larger groups of human society.

The human race recognized the efficiency of the honey bee organization at that time. They said there must be some controlling factor to govern the operations in and out of the hive and the destiny of such a wonderful going concern as the bee colony. It was very evident that some final authority was in charge of operations. It is easy to see why, in a parallel situation, human society felt called upon to look to a guiding individual. This individual was called a king. So human society was happy. After a period of time, perhaps 300 years, someone discovered in the bee colony organization,

one individual which was larger than all of the other individuals and, of course, this was logically looked upon as the king. Human society prospered under the king, and it was not until several hundred years later that society was rudely upset by the discovery that this bee which had been called the king was, in reality, laying eggs. So a complete upset of honey-bee organization and of human organization was called for. It was only logical, therefore, that they should turn to the term of "queen." And the very wonderful and convenient thing is the correlation that this occurred at the time of the first female ruler in England. So, it was a not impossible situation to set up as the guiding authority a female or the queen.

As long ago as the Fourth Dynasty, nearly 4000 years B.C., the bee figured in the symbolical history of Egypt. It is of interest to know that the bee as the symbol of kingly power appears on the hieroglyphical portion of the famous Rosetta Stone.

This bee hieroglyph, denoting the king of lower Egypt is found on inscriptions from the First Dynasty down to the Roman period, that is, for about 4000 years.

In India, regulations were given as to the amount of honey a king might claim from his subjects. He was allowed a sixth part of the honey produced, a fairly generous allowance. Honey was so valued that if a man stole honey, he had to pay three times its value and in his next life he became a gadfly.

There probably is no better place to associate certain customs than with government. These are money and taxes. Interestingly enough, we have had wars almost as long as we have had human society. One tribe or one clan has seen fit to prey upon the resources of another tribe or clan. The winner in early times imposed penalties of so much wax and so much honey upon the losing tribe. Unfortunately, the supply was not enough to benefit the rank and

file of the conquering tribe but was restricted to the gratification of the rulers and their henchmen. This item of food was seldom made available to the grassroots individuals. From this, grew the practice of levying taxes even among the grassroots population of a country. Again the honey was used for the gratification of the ruling group and close associates. Wax as a weather-proofing material was found desirable to improve the domiciles and palaces of the rulers and their associates. So wax was a levy in penalties and taxes.

The influence of the bee is carried on as money was developed and various items were used to signify money values. We find that the symbol of the bee was used on many pieces of money in the early civilization. It has not been determined just where the honey bee occurred, whether it was on the nickel, dime, or quarter piece.

But it has taken many additional

hundreds of years to convince ourselves that the queen of the bee colony was not the ruler in the sense of a ruler in human society. There certainly is an indefinable something existing in the bee colony which we have not been able to fathom with our research. And it is very evident that something is lacking in our human society when we attempt to divest the authority in a guiding or ruling individual.

Sharp says of the queen bee, "She is life, not the will to live, deriving that power from the colony. She is only a well of water for a thirsty people, an oasis in a barren desert. She does not give; they take."

And maybe our relationship is expressed by Sharp when he says, "But beautiful in its perfect working and therefore somehow good, society, perhaps not the individual soul, is the immortal thing, the end far off divine and we are only human bees laboring as the bees labor in a world of fitful honeyflows; ourselves are sacrifice, inconsequent, incomplete, finding our fulfillment, like the bees, in a future abstract world looking as they look for a perfect city eternal in the fields of honey yielding bloom."

Religion

It is difficult indeed to segregate some of the human emotions into airtight compartments. In looking back over the period it is indeed difficult to separate two vital human emotions. They are, after all, very closely integrated though not often considered in close relationship. They are what we call religion and what we call love. And it must be said that the term love deals with emotions which are sometimes considered outside of the realm of religion or perhaps a little more far reaching in its everyday application. There are some who may say that it should be considered as a segment of religion. At any rate, love and religion have been influenced greatly by the honey bee and, in our present day application, are perhaps rather set apart from the topic which has just been discussed, that of government.

We find a constant association of the honey bee or its products with the various elements of the human ceremonials which we now know of as religion. We must still recognize the function of this association in our present day society. The bee, or its products of honey and wax, are always present in any consideration of any effort with religion.

It is possible that the unknown



Weiland segne Du die Bienen, die durch Wachs dem Altar dienen,
die durch Honig uns ernähren, die uns Fleiß und Ordnung lehren

This picture illustrates some aspects of the Christian symbolism of bees and their products. The poetic inscription is inspired by the Christian swarm charms, mentioned by Paddock. Translation: "Lord bless Thou the bees, Who serve Thine altar with their wax, Who nourish us with their honey, Who teach us industry and order."

guiding influence which must be present in the honey bee is also recognized as prevalent, ever present, and absolutely essential in the activities of the human race. That indefinable something which we call spirit is, after all, exerting a tremendous influence on the activities and behavior of the human.

The honey bee has been a symbol of deity and is also used as the symbol of authority in higher ranks of religious activity. It has been a symbol for pure living. It has been a symbol of righteousness.

Honey has been a symbol of strength and purity in its constant association with the rituals which are the foundation of religion. A drop of honey has been used in baptism to insure strength and purity of the babe as it developed into adulthood. Probably that was an appropriate symbol rather than the water which is now used, since sanitation was undoubtedly a problem in the earlier days in many countries, as it is today.

Honey has been recognized as a preservative and we find its use in many rituals associated with religion, even to the extent that honey was placed with the deceased to assure provision until the entering of the land eternal. It is not so out of place to find that our later peoples, even the American Indians, placed food with the deceased. In which case the item most commonly used and most revered was corn.

Honey was used as a preservative of the physical body of the individual, especially in the case of royalty. We also find beeswax as a preservative agent used in the highly developed technique of embalming and preserving which was last identified with the early Egyptian Dynasties.

In Hindu literature, Vishnu is the chief of the Gods. Vishnu, the Preserver, the creative force of nature, has closely associated with him the bee which also represents the creative force in nature and is the symbol of the sweetness and pain of love. Vishnu is the God of the sun and the moon and these also are symbolized by the bee which, as the dispenser of honey, represents the moon; as the appropriator of honey represents the sun. The bee thus becomes the symbol of birth upon the earth. Hence, and for other reasons, the use of honey at weddings and at the birth of a child.

In medieval times, the belief was held that "The bees never suffer but one king among them. Ah, Jesus, help us all to shun idols that our



Ben Knutson again, in this Christmas picture, shows how closely the beeswax candle is to human hearts. The virgin light of the altar; the sign of deep religious feelings.

hearts may be surrendered in love and truth to thee alone." With its heavenward striving flight in the realms of light, the bee is the symbol of resurrection. The bee was very generally the symbol of the greatest purity and the immaculate conception has been compared to the flower from which the bee extracted honey without violating it. It was because of the supposed purity of the bee that honey and wax had their significance in religious ceremonies.

As in Hindu mythology, so in that of Greece and Italy we find the bee intimately connected with the creative force of nature. The moon, likewise, which presides over generations, was called the "Bee" by the ancients. The souls of the dead were supposed to come down from the moon to the earth in the form of bees reminding us of the ancient Hindu faith concerning honey, the bee, and the moon. All souls, however, proceeding into another generation, are not simply called bees but those who lived justly and who, after having performed such things as are acceptable to the Gods, will return again to their kindred stars.

In later writings we find that honey has not lost its place in the ceremonials but, as of old, is used at weddings and put upon the tongue of the newborn male child.

It is interesting indeed that honey was the first sacramental wine used in religious ceremonies and it is still a requirement for the same ceremonies among some religious sects today. Likewise, it is interesting that beeswax should be so closely associated as a vital instrument of religion, that its use has carried on to the

present day in more than one of the sects. It was a wonderfully logical discovery that when the early peoples were looking for some symbolic representation of the virgin origin of Christ that they should have chosen beeswax, which is the product of a virgin, the worker bee. It should be a matter of great consolation to those who call themselves "beekeepers" or who are associated with bees that they should command this basic and intimate respect from religion and it should be a matter of satisfaction that the honey bee or its products of honey and wax are associated with the recognized seven sacraments of religion as known in modern times.

Love

It is necessary to follow the preceding topic closely with this term of human emotions which is found widespread among the ceremonials of man. Love, of course, is an indefinable something which influences humans in different ways and is expressed in different ways by different people. It has a common origin and its reaction is about the same whether it is among the so-called primitive tribes, black, yellow, or white in color; in the tropics or in the arctic regions; in early times, in medieval times, or in the present time.

Love is that expression of a mother's tenderness for the babe. It is the expression of youth, one for another. It is the basis of relationship in old age.

It is only logical then that love should frequently be signified by the thing which is dearest to us in the term of honey as used by all ages to signify close association, one which is dearest to us.

Love is frequently expressed in the institution which is called marriage. It is interesting that this institution has been a part of human ceremonials for a long period of time, recognized very early as an institution of human relationship. It has always been zealously guarded and probably is seeing its severest strains and stresses from the outside in our present day society.

Kama, the Hindu God of Love, requires the help of the bees in performing the duties of his delicate and difficult office. The bow he bears is sometimes made of sugar cane to symbolize the sweetness of love and it is strung by a chain of bees symbolizing the pain of love and also the source of sweetness.

The Romans are said to have had a special Goddess of Honey, Mel-

lonia, to whom they made sacrifices. Cupid does not, like Kama, bear a bow strung with bees but we are told he sometimes dips the golden arrow, that incites love, into honey to make the love fortunate.

It is interesting to ponder on the term honeymoon, a part of the ritual of marriage. It was the custom of newly married couples to serve honey to all friends who crossed their threshold for a period of one moon. This custom developed before there were any calendars or any of the means of measuring time developed by man. The reliance was entirely upon the heavenly body we call the moon. Such common conveniences as the Saturday night bath and the TV wrestling program could not be identified by the handy calendar hanging on the wall. The timepiece then was not Big Ben but rather the heavenly bodies of the moon and the sun and it is interesting that even with our exact computations of today, we are finding ourselves with the perplexing problem of accurately measuring time by the device called our calendar. And it is interesting to recall that the calendar was revised not many hundreds of years ago and we are talking about customs of human association which developed at least 20,000 years ago.

Literature

The literature of the early peoples was based upon legend, the indefiniteness of something, including love. The literature of all of the countries from the very earliest Hindus through the countries of the Euphrates and into Egypt was based upon the use of the honey bee to signify the spirit or the ethereal. Also, the honey bee was carried throughout literature as the symbol of love, strength, and purity. Since there was not a great supply of writers in those days, the few wielded a tremendous influence upon the thinking, if we may call it that, of the general population.

In the drama of the Toy Cart in Hindu literature, written by an author considered the Shakespeare of the Hindu dramatists and contemporary with some of the other noted writers, we find that verse more dignified, if less graceful, and the bee as much a favorite as ever.

For example:

I do not, trust me, grieve for my lost wealth

But that the guest no longer seeks the dwelling,

Whence wealth has vanished, does, I own, afflict me.

Like the ungrateful bees who wanton fly

The elephant's broad front, when thick congeals

The dried up dew, they visit me no more.

When first the flower unfolds, as flocks the bees

To drink the honeyed dew, so mischiefs crowd

The entrance opened by man's falling fortune.

Of course, it is necessary for us to properly adjust ourselves to the thought that the books had to be printed by chiseling upon rocks in the beginning. Later they were hand written by the so-called pen and paper method. So there is little wonder that our records are few and far between and that what is available must be considered as significant. The printing press which we enjoy for the wide distribution of our literature today is really of recent origin. So when we say that the literature of those early peoples were replete with references to the bee and its products of honey and wax, we mean that now and then a record is available to us. Of course, the so-called texts were more prevalent as civilization developed and spread throughout the world. We must realize also the influence of the tradition, father to son and mother to daughter information, and education. These items were then a matter of personal contact rather than a matter of the free ways of the air.

Science

Science is a term which is getting widespread use today and, of course, it has relatively recent origin in the evolution of human society. We can imagine that there was little science 15 or 20 thousand years ago and perhaps it's a good thing it didn't get accelerated at the present pace or we would have been much further along in our ability of destruction than we now are. But there are a good many interesting items which show the influence of the honey bee upon scientific developments.

It is interesting that at one time observations indicated that the diameter of the worker cell was the same in March as in October, it was the same in Persia or Palestine, or Egypt. It is only logical, then, that this diameter of the worker cell of the honey bee should have been proposed as a standard for linear measure. But it was not until 300 years later that the ingenuity of man developed a means of measuring the

diameter of the cell to indicate any variation. And it is wondered if the 3000th of an inch tolerance which is permitted by the bee was even then recognized as a variation from season to season and from area to area.

The angles of the cell, 6-sided as it is, was a matter of great study and example for the early mathematicians when geometry was founded. Those angles have been studied by man since then to determine the effectiveness of such angles on the strength of the construction of the worker cell. So the influence has spread from the area of pure mathematics to the area of architecture.

It is interesting that chemistry has also become involved as more human association has been experienced with the bee. Certainly the honey bee is a chemist par excellent in many fields. We have recognized it in honey for a long time. It was recognized in the item of royal jelly in which interest has recently been revitalized and may possibly now have more importance for the human race. This is another example of the ability of the human to delve into and determine the intricacies of the honey bee organization, not only for the influence on but the benefits to the human.

And now as we look back over the road which the bee has traveled, first by itself and second in company with man, we must be impressed with some outstanding thoughts. The bee has remained unchanged through the last two million years. It has not been changed through its influence with man or through the influence of environment which has been changed as a result of man's activity. We cannot help but wonder how the bee has been able to withstand all efforts of man to change its being. It is an outstanding example of a creature which has resisted the efforts of man to change it. On the other hand, it is hoped that man has been influenced by the honey bee to the good of its society. As we travel along life's road, with its perplexing problems, with wonder as to what is in store, may we not assume some of the serenity of the bee in meeting its problems and hoping for ourselves the same solidity with which the bee has withstood the onslaughts of changing times.

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Traveling With The Lovells . . Eastern Texas

by Harvey and Ethel Lovell, Louisville

This bi-monthly, by Dr. Lovell and Mrs. Lovell, should be of considerable interest as travelogues that take us about the country to tell of beekeepers and honey plants, either near or far from home. Dr. Lovell is the son of John Lovell who wrote "Honey Plants of North America" and was a bee authority of note in his day. Dr. Lovell is Professor of Biology at the University of Louisville.



WE drove south through Arkansas, the eastern corner of Oklahoma and entered Texas on June 20 where we spent our first night at a stone court at Dallas. The next day we visited the honey-packing plant of T. E. Burlison at Waxahachie. He packs over 3 million pounds of honey a year and on the previous Saturday morning between 8 and 12 A. M. took in 30,000 pounds and shipped out 70,000 pounds. He showed us some of the amazingly white samples of southwestern honeys which he had received. He uses a Pfund grader to rate his honeys and prepares a fancy white pack with a rating of 20 or less. Vetch grades from 0 to 5, Hubam clover under 15, and cotton on black land also under 15, catsclaw is 20, but mesquite is darker and rates from 30 to 40. We also had the pleasure of meeting his sister, Thelma Burlison, who had recently written her masters' thesis on the honey plants of Texas.

Continuing our journey southward, we next stopped in Corsicana at the home of Lawrence Nolan, who is famous for his comb honey. Although Mr. Nolan was away, we found Oliver Watt in charge of several men busy extracting the spring crop. They worked at high speed, uncapping with an electric knife and placing the dripping frames in a large power extractor. As soon as they filled one, they started it going and moved over to a second extractor. The honey looked and tasted very good to us, but Mr. Watts explained that the admixture of honey from niggerhead made it slightly darker and stronger than it should be. Niggerhead, we learned, is the

name given in the South to the black-eyed Susan where it is often very common. The Texas species has an orange spot on the base of each yellow petal.

On July 22 we arrived at College Station where we had an appointment with Dr. A. H. Alex, the beekeeping expert at Texas A. and M. We also had a pleasant chat with Dr. F. L. Thomas, head of the inspection service in Texas. With the aid of Dr. Alex we spent several days photographing and taking notes on local honey plants. In spite of the unusually dry weather, we were lucky to find many of the typical species in bloom and others in fruit.



Blackland horsemint yields white honey with a strong minty flavor.

Mesquite is the most common tree in Texas and we found it just coming into bloom all across the state. The trees are straggly and look a little like old apple trees. They spring up everywhere on abandoned land and furnish shade for cattle and man alike. Roadside parks are numerous in Texas and we ate many a lunch in comfort thanks to a grove of mesquite. An all-green tree with no apparent leaves, we learned was retama or palo verde; it had clusters of yellow pea-shaped flowers which are attractive to bees. Huisache, a species of Acacia with orange-yellow flowers, is very common but is valuable only for pollen. Prickly pear, a cactus, is very common in many parts of Texas, but Dr. Alex said he had known of only one honeyflow from it—in the San Antonio region where it made 25 pounds in late April. Coma or southern buckthorn was in fruit and produces a light-colored honey.

The honey flora is rapidly changing in many parts of Texas. The native scrub growth is being removed in order to make way for such crops as Hubam clover, hairy vetch, cotton, and to improve pasture land. Sometimes this helps beekeeping when the crops secrete nectar, and sometimes it hurts it when the native honey plants are removed, but in any case it changes the conditions. Beekeepers have to move their bees to areas where the proper honey plants (such as cotton) are grown.

We spent one day in the eastern area of Texas where we found the scrub palmetto just coming into bloom. We also spent several hours

(Continued on page 149)

How to Control Robbing

Even those with the most experience find this difficult at times. In "Gleanings" for June, R. L. Parker tells how bees prey on colonies that are weak, or have too much entrance exposure and how they pounce on dead colonies after winter; often in winter in a warm spell. Often robbing starts because the operator is careless, exposes honey, works hives with tops wide open, or works too long in a big yard. Prevention is the best precaution. When a flow is on, bees seldom rob unless the weather prevents field trips; then they may rob more readily than ever. You might say that robbing is an ever present danger. Start all work in a yard cautiously and only allow exposure when you find the bees are not inclined to rob. If you take combs from a hive, for temporary work put them in a tight comb box and close it while you do what you have to do, then return them finally to the hive. Remove side combs rather than center combs. Cover the hive tops with squares of cloth dipped in water containing a little carbolic acid. Don't do a lot of leisurely, wide-open work except when conditions allow it. Don't throw entrances wide open just after finishing a job. If you need to enlarge the entrance, do it later when you have no need to do any other work in the yard. Sometimes when bees are intent on robbing and there is something you must do in a yard, let them rob on combs with some honey in a hive set up as a dummy at the side of the yard. When they are intent on these combs, you are safe for a limited amount of careful work. Weather helps reduce robbing. If you work on a cool or a windy day, carefully, the amount of robbing is much less. Should bees, in spite of precautions, insist on robbing a colony, use carbolic water for outside sprinkling and green grass over the entrances. If this fails, move the colony to a new spot; close the entrance almost entirely, and put a comb dummy in the old spot. Then gas the robbers. Just put cyanide in the entrance of the dummy and let 'em rob. They won't rob again. Then the original hive may be replaced before you leave.

IN MEMORIAM

F. C. Erkel

Marshall Whitcomb, of Rockford, Minnesota, gives news of the loss of Frank C. Erkel, a long time beekeeper and a man active in introduc-

Locating Those Bees

The question of where to put bees is apt to be of more interest in spring than during the balance of the year. In the December issue of "Modern Beekeeping," Marvin Kosanke calls attention to the fact that you should not only know the exact spot where the bees are to be located but you should know all you can find out about the general area around. What are the sources of crops, of pollen for build-up, what is the farming program? Are these things in your favor? How many bees can be supported where you want to locate? Country over, small yards, thirty to forty colonies or less, do better than larger ones. Your honeyflows should be steady, year by year, of good quality honey, and you should know what the flow periods are so you can be ready for them. The soil also has an influence because if the soil type is right your location will be a good one for years. We have known sites where the soil would not do for general farming, yet where it was just right for the flora that gave the honey. In reverse, the soil that supports fertile and productive farms, if the farm rotations are right, may be ideal.

Remember too that you must have access to the bees yourself, so choose a place with suitable roads. Don't, however, put the bees where they can bother your landlord, his stock, or his family. Try to find a spot where you have some protection with windbreaks. Fence against stock. Supply water for the bees (brook, pool, or water tank). Make a friend of your landlord. Most farmers today think the bees are needed on the farm so try to emphasize that feeling.

Von Frisch's "Dancing Bees"

An American edition of "Dancing Bees" by Karl Von Frisch, already reviewed in the August, 1954, edition of ABJ, has appeared with Harcourt Brace & Co., of New York, as publishers. This 178-page book contains most of the results of Von Frisch's work and is written in a layman's language so it is easily readable. Available from the publishers. The American Bee Journal has a stock of these books.

ing new plants. He kept bees for 70 of his 87 years, which is quite a record. He was seriously injured by a truck on Dec. 5 when he was returning from making a call on a friend. He owned the Lake Sarah

Excluder and Upper Entrance

The queen excluder should remain a queen excluder and not become a honey excluder. This method of use has proven very satisfactory to me. As I repair and repaint hive bodies in the winter, I bore an inch auger hole in the full depth hive bodies I use as supers. I purchased a quantity of poplar cooperage bungs to close these upper entrances.

When the honeyflow comes, an excluder is placed above the two hive body brood nest and the entrance plug is taken out of the super. The entrance is closed in the brood chamber. As more supers are added, the entrances may be opened or closed as desired, although I feel that I have had best results with the lowest super entrance being open and the others closed. Most of the field bees use this entrance and do not need to work their way up through the brood chamber and excluder.

Frank Lucore, Nebraska

Inducing Robbing as an Aid in Removing Honey

As an aid in honey removal when bees are inclined to rob, we place ten-pound can feeders in boxes so bees can get to the holes in the cans. In the cans, use a sirup made with about one-third sugar. Scatter these feeding stations around the apiary at distances of about a hundred feet. Do this about two days before you start taking off honey. The night before take-off be sure that the feeders are full so the bees will be kept busy during the next day. We use about two or three dozen feeders for 200 colonies. We use acid boards in removing the honey. In a 38-colony yard, the honey is off so quickly the bees never know a thing about it. If you have a large yard, you may have to go back two or three times. Skip a day, see that the feeders are okay; then hit them again. Seems to work fine; hardly have any trouble when otherwise you could do nothing because of robbing.

Verne French,
Lompoc, California

Specialty Farm and his letterhead reads: "Ginseng and Golden Seal seed, Fish Bait, Red Hybrid Earthworms, Crickets, Meal Worms, Other Specialties." This poses a list of very unusual occupations.

(Continued from page 147)

with Mr. and Mrs. Howard Weaver at Navasota. He raises only Caucasian queens, which he firmly believes are superior to all other kinds as honey getters. At dinner they served us some fresh horsemint honey, which was so strong with aromatic oils that it made me cough at first. It was a beautiful honey, white and clear and with a most interesting minty flavor. Since many packers will not purchase it, Weaver packs it as horsemint honey and finds that it has a good sale under this name. There are at least two kinds, sandyland mint with yellow spotted flowers and the blackland horsemint with bluish bracts at the base of each flower cluster. The latter yields best, said Mr. Weaver. We searched the countryside for honey plants in bloom. Ear-drop vine was just coming in flower. This vine climbs high up in trees and bushes and yields a greenish honey, resembling lubricating oil, sometimes as much as 60 pounds.



Among the horsemints are several valuable honey plants. One of the most common is the Wild bergamot, (*Monarda fistulosa mollis*). This species yields nectar in abundance but the corolla tubes are so deep that honey bees have difficulty in reaching the nectar. Some seasons the flowers are humming with bumblebees but few honey bees. At times the nectar flow is so abundant that honey bees are able to reach a portion of it and at such times they

make the most of the opportunity, even storing some surplus from this source.

When the wild bergamot is in bloom it is sure to attract a great variety of insects. Butterflies in large numbers as well as wasps and bees visit the flowers in search of nectar. Bumblebees are regular visitors since it appears to be one of their most dependable sources of food.

Melvin Pellett

Recipes---

Ladies, do you have favorite honey recipes? Send them in. Your subscription will be credited an additional three months for each recipe published.

WAYS WITH HONEY

In baking a ham, baste it with honey; it adds flavor and a fine glaze. Drop a teaspoon of honey on top of each unbaked biscuit before baking; the honey sinks into biscuit to give a surprise center.

New cake frosting: Beat one egg white with $\frac{1}{2}$ cup honey and dash of salt until it stands in moist peaks, then cover cake; add cut up dried apricots to frosting for variety.

(From Quincy Herald-Whig, Quincy, Illinois)

HONEY OATMEAL BREAD

Baking bread at home is something I enjoy. Since I keep bees I like to combine the two projects; hence this recipe for Honey Oatmeal Bread. It makes two loaves and never fails to come out right and to taste good. I find it simple and it certainly is wholesome for the family.

Use $1\frac{1}{2}$ cups scalded milk; 2 teaspoons salt; 2 tablespoons shortening; 1 cup rolled oats; 2 cakes of yeast; $\frac{1}{2}$ cup honey, slightly warmed, and about 4 cups unbleached flour plus 1 cup whole wheat flour, mixed together.

Combine scalded milk, salt, shortening. Stir in the oats and let stand until lukewarm. Dissolve yeast in $\frac{1}{2}$ cup of lukewarm water. Add honey and 1 cup of the flour; beat smooth. Now add oatmeal mixture and the remaining flour. Mix all together well, turn dough out on a board, and knead for 10 minutes. Let dough rise until double in bulk. Divide it into two parts.

Flatten the two parts and let them stand for $\frac{1}{2}$ hour. Place each in a bread pan; butter the tops. Let rise to double the bulk. Then bake at 350 degrees for about 50 minutes.

Mrs. W. E. Camp, Pennsylvania

(Sent in by Wayne A. Endy, Bernville, Pa.)

HONEY-RAISIN COOKIES

- | | |
|--|--------------------------------------|
| $\frac{1}{2}$ cup shortening | $\frac{1}{2}$ teaspoon baking powder |
| $\frac{1}{2}$ cup liquid honey | $\frac{1}{4}$ teaspoon soda |
| 2 eggs | $\frac{1}{4}$ teaspoon salt |
| $1\frac{1}{4}$ cups sifted all-purpose flour | $\frac{1}{2}$ cup seedless raisins |
| $\frac{1}{2}$ teaspoon nutmeg | $\frac{1}{4}$ teaspoon vanilla |

Cream honey and shortening thoroughly. Add the eggs; beat until well mixed. Sift together the flour, nutmeg, baking powder, soda, and salt. Add to the creamed mixture, stir until mixed. Add raisins and vanilla. Drop batter by tablespoons on a greased cookie sheet, 2 inches apart. Bake at 350° F. for 12 minutes or until golden brown. Makes 2 dozen cookies.

(From Home and Garden Bull. No. 37, U.S.D.A.)

HONEY ORANGE CAKE

- | | |
|---|--------------------------------|
| $\frac{1}{2}$ cup shortening | 1 teaspoon grated lemon peel |
| $\frac{1}{2}$ cup sugar | 2 cups all-purpose flour |
| $\frac{1}{2}$ cup honey | 2 teaspoons baking powder |
| 1 egg, well beaten | $\frac{1}{4}$ teaspoon soda |
| $\frac{1}{2}$ cup finely shredded orange peel | $\frac{1}{4}$ teaspoon salt |
| | $\frac{1}{4}$ cup orange juice |

Cream shortening. Add sugar gradually while creaming. Cream honey into the mixture. Beat in the egg. Add orange and lemon peel. Sift dry ingredients thoroughly (flour, soda, baking powder and salt). Combine dry ingredients and orange juice alternately to creamed mixture. Spread in well-greased square cake pan (8" x 8" x $1\frac{1}{2}$ "). The mixture is quite thick. Bake in moderate oven (350 degrees) about 45 minutes. Remove from oven and immediately pour the following mixture over cake.

HONEY ORANGE POUR-OVER

- | | |
|--------------------------------|-------------------------|
| $\frac{1}{2}$ cup orange juice | $\frac{1}{2}$ cup honey |
|--------------------------------|-------------------------|

Combine and pour over hot cake as soon as removed from oven. Cool cake in pan and remove servings as needed.

(From American Honey Institute's "Two Sweet Gifts—Citrus fruits and honey.")

PECAN PIE

- | | |
|-------------------------------|----------------------------|
| $\frac{1}{2}$ cup honey | 3 eggs, beaten |
| $\frac{1}{2}$ cup brown sugar | 1 cup pecan meats |
| $\frac{1}{4}$ cup butter | 1 9-inch unbaked pie shell |

Blend honey and sugar together. Cook slowly to form a smooth sirup. Add butter. Add beaten eggs and broken pecan meats. Pour into pie shell. Bake in moderate oven 400° F. 10 minutes. Reduce temperature to 350° and bake for 30 minutes, or until an inserted knife comes out clean.

(Tempting Honey Recipes from Sue Bee.)

Honey and Your Diabetes

No. 1 by D. C. Jarvis, M.D.

I AM in receipt of a letter from a man living in California which reads as follows: "Dear Dr. Jarvis: I am writing asking a favor in regard to diabetes. I am 75 years old and have been working with bees about twenty years. I have taken the American Bee Journal all these years. I have saved all your articles in the Journal. They have been a great help to me as I have used the things you mention about the value of honey when selling honey.

"I have always been fond of honey and seldom use sugar. I have been through several operations including blood clots and the like. My doctor now tells me I have diabetes and will have to stay away from all sweets including honey. I would appreciate your opinion. Do you think honey could be classed as a cause of diabetes? Very truly yours."

The question as to whether honey may be safely used by those having diabetes mellitus must have been asked beekeepers many times. In

answering this question both the readers of the American Bee Journal and I need to play a part. I will endeavor to present the medical side of the question. If those of you reading this, will write me your personal experience with honey in diabetes whether good or bad I will endeavor to edit this material and leaving out all names will present it in the form of short articles in the American Bee Journal.

When considering the use of honey by those who have diabetes mellitus we are handicapped by the fact that organized medicine does not know the true cause of it. In reading medical books you would read that diabetes mellitus is an endocrine condition in which there is a deficient or disturbed secretion of insulin by the islet cells of the pancreas, characterized chiefly by an excess of sugar in the blood and consequent presence of sugar in the urine. You would also read that diabetes is a rather common disease. The question arises when one has finished reading as to what causes

the endocrine disturbance. Organized medicine answers that it does not know.

If we turn to Vermont folk medicine and seriously study it we find we are not so handicapped. Vermont folk medicine teaches that a lack of potassium and acid is the cause of diabetes and that sugar has very little to do with its cause. It teaches that potassium and acid are necessary in order for the pancreas to do its work. When these are lacking, sugar is not handled well in the body. Vermont folk medicine uses honey in diabetes because it is acid in reaction and represents a good source of potassium.

Vermont folk medicine looks upon the sugar content of honey as nature's method of packaging potassium. Potassium is bitter when taken alone. Nature overcomes this bitterness by adding two natural sugars which is her way of packaging a bitter mineral.

As a result of considering the use of honey in diabetes from the viewpoint of organized medicine and Vermont folk medicine we learn that organized medicine says no, do not use honey while Vermont folk medicine says yes, use it because it is a good source of potassium.

You Asked for It . . .

If you have any questions for which you need an answer, address them to Frank E. McLaughlin, American Bee Journal, Hamilton, Ill. He will give you the answer himself, or he will get you an answer from the best source possible. This service is free.

Francis Henderson, Illinois

Three questions: Is pollen feeding beneficial around St. Louis or is enough early pollen available? Would feeding light sugar sirup give as good results? Does any southern breeder specialize in comb honey queens? My bees are in a small orchard. How shall I avoid spray danger? Should the bees be moved?

Feeding sugar sirup or pollen supplement stimulates brood rearing. Light sugar sirup will do that, and is all right if the colony has plenty of stores, and does not need the sirup

for food. I always dissolve one 7-7/10 grain sulfathiazole tablet in each gallon of sirup that I feed as a preventive of A.F.B.

I don't know of any queen breeder that specializes in queens for comb honey, alone. The beekeeper should choose colonies that are good comb builders for comb honey. Most sprays used on fruit trees are toxic to the bees, if the bees come in contact with the spray. Trees should not be sprayed when in bloom. They should be sprayed before bloom, and after petals have dropped off. I suggest moving the bees while spraying is being done. D.D.T. and other ingredients in fruit spray will kill bees if they come in contact with the spray, even on grass under the trees. Some sprays cling to the trees for sometime, and if the bees get the poison on them it paralyzes them and they act as if they had Nosema. Bees should be in the or-

chard during fruit bloom, for the pollination of the trees, but I suggest they be moved out during the times of spraying. We have had entire colonies killed out from insecticide poisonous sprays used by neighbors.

Chester O. Jennings, Colorado

I am using some acetone drums for my settling tanks. When the honey sets in them for a while the metal gets rusty and flakes off into the honey making little dark specks that are hard to filter out. What can I get to coat the inside of these drums to prevent this? I am afraid to use enamel because there may be something in the honey that would dissolve it.

For coating the steel drums which you are using for honey settling tanks, we would like to recommend to you a sparkling white tank coating which is tasteless, odorless and non-toxic, which we can offer to you at \$2.75 per quart. We also have an aluminum tank coating which is

Pennsylvania Stories

He Did Not Shoot

by George Rea



A straw skep-box hive apiary of fifty years ago, the kind that often were owned by "toughies" with a handy shotgun. Photo by J. A. Allard, Osceola Mills, Pennsylvania.

WHILE the bee inspector makes many friends, the rougher side of human nature often provides interesting diversion. This experience was one of my roughest and best.

Word had reached me that this beekeeper resented state bee inspection and had declared he would shoot me if I came around. I found out that he was a boisterous bluffer, a follower of Bob Ingersoll had a son in the penitentiary, and was living with a woman not his wife and their daughter. He was reputedly a good and successful beekeeper and produced large crops of good comb honey.

The time came to "beard the lion in his den" and I decided to call in late evening. I hired a horse and

buggy and took a boy to bring the buggy back as I expected to stay overnight. We started out on the trip of five miles through mountainous country. The road was deep with mud and night was falling as the boy pointed to a light and told me this was the place.

Inside I could see stacks of fancy-grade section comb honey. Two women sat with their backs toward me and on the other side of the table was a middle-aged and rather good-looking man. With short knives they were removing the propolis clinging to the edges of the section boxes. Each section was then faced with a pane of glass and a rubber band snapped on to hold the glass.

When the man saw a stranger with a satchel he concluded that I

was a honey buyer. Before he could recover, I commented on the wonderful honey and on his beekeeping skill in producing so fine a product. When he asked me if I was a honey buyer I said, "No, I am Rea, the bee inspector you said you would shoot." He banged his fists on the table and shouted, "What?" But as quickly his countenance changed and he said, "Well, you are my guest, and you are a real beeman. Put down your bag and draw up a chair and we'll talk bees."

I spent two days and two nights with them in their sawmill bunk house—one story of rough boards with a kitchen, dining room, and two bedrooms with rough board bunks.

To the apiaries this beekeeper drove a good team of horses and wagon and during our inspection we removed many cases of fine comb honey. His bees were well kept in modern factory-made hives with nice all-worker combs built on comb foundation. We found a few cases of American foulbrood which we destroyed by burning. The second day he drove me into town with a hearty invitation to return.

Thirty-five years later, my wife and I were driving through this same valley and stopped at a nice-looking gas station and restaurant. The food was good and the dining room attractive, as was the young woman who waited on our table. When I asked her if she had ever known a man whose name I gave her face brightened and she told me he was her grandfather. She said he was old and crippled and could not work any more but lived with her mother and herself.

also harmless, which is priced at \$1.50 per quart.

Mrs. Jim Stull, Wisconsin

I have two questions: Can I use nail polish or other quick drying paint to mark queens? I want to grade my comb honey next summer. What is the Pfund color scale used for grading honey?

Nail polish can be used to mark queens, but occasionally it will peel off. We use Testor model aircraft marking fluid. I feel sure you can but it locally in a variety of colors. It does an excellent job.

A Pfund color grader is used primarily for extracted honey. I would suggest you write the Superintendent of Documents of the U. S. Government Printing Office, Washington, D. C., for a copy of their revised circular No. 24 covering grading of comb honey. Normally the cost is only 5c. They also publish an official color chart entitled "Color Standards for Grades of Comb Honey" at a price of 15c.

Those two, I am sure, will give you a complete picture on grading comb honey and enable you to answer most any question that might come up.

Multiple Mating . . .

Stephen Taber, III, of the Entomology Research Branch, U.S.D.A., in cooperation with the Louisiana State University, in the December 1954 issue of the Journal of Economic Entomology, writes on "The Frequency of Multiple Mating of Queen Honey Bees." The data presented indicate that queen honey bees allowed free flight mate on the average of six and a half times. Virgin queens allowed only one flight indicate a large proportion of multiple matings on a single flight. It seems likely that the actual number of matings must not be less than four and not more than nine.

Our Cover



APPLE BLOSSOMS

As this is written (March 16) spring has turned to winter, which may kill some spring bloom now out. Soft maple takes a setback most years in this struggle between the seasons, but apple blossoms only once in a while fail to benefit the bees in their eager search for food for the rapidly growing colonies. Since they are so eager and there are few other competitors among the spring flowers at the time, the bees do a concentrated job and, as a result, they are the best pollinators possible for the orchardist. Few know that the apple was a native of Asia which has spread to most of the temperate regions. The blossoms secrete nectar freely and surplus from apple in small amounts is not unusual since the sugar content of apple blossoms, according to Vansell, is as high as 57%. One of the best times to requeen is in a good period of apple bloom, since the queens are easily found and acceptance is very good.

Sugar Tax Refunds . . .

Our readers are no doubt already acquainted with the possibility of obtaining a refund of roughly a half cent a pound on sugar fed to honey bees by applying for the refund at their nearest Internal Revenue Office. Mr. G. L. Hodson of Indiana calls our attention to the fact that such applications should be accompanied by a basis for the claim, the statement that the granulated sugar was of a polariscope test of above 90% (most is above 99%) and a citation of when and how the sugar was fed. Ordinarily the wholesale house will be glad to furnish you a statement on polariscope test. We suggest that those interested write to their Internal Revenue Office for copies of Blank No. 843 and we shall be glad to submit standard forms which can be followed for other information. The claim must be filed in duplicate and one copy should be retained by the applicant, in addition.



Beekeepers discuss the recent Chicago convention at a meeting at Meineke's Honey Farm, Palatine, Ill.—(L. to R.): H. A. Schaefer, federation president; John Lis, convention chairman; L. P. Baker, convention committeeman; M. G. Dadant, American Bee Journal editor; Miss Monica Siegham, American Honey Queen for 1955; Alan Root, American Honey Industry Council member, and Carl E. Millon, chief apiary inspector, state of Illinois. (Photo by David Meineke)

Treatment in Wax-Salvage Plant

(A Part of the Nebraska Bee Inspection Law)

A. It shall be permissible with a permit from the inspector to transport diseased hives and their contents to a licensed wax-salvage plant, after the bees in the hives have been killed and the hives sealed.

B. Any person desiring to operate a wax-salvage plant must apply to the Director of Agriculture for a license which the State Entomologist shall issue after inspecting the plant. Licenses are good for one year.

C. All salvage operations from diseased colonies shall be performed:

1. In a tightly screened enclosure.
2. Entrance to enclosure shall be through a six-foot vestibule, double-screened with tight-fitting doors at each end.

a. Frames and contents shall be held not less than 30 minutes in boiling water in a vat drained by direct connection to a sewage disposal system or cesspool. Frames must then be boiled not less than 20 minutes in lye water solution.

b. All other hive parts shall either be scorched or boiled 20 minutes in lye water solution.

c. In lieu of either of the above treatments, frames, hive bodies, and so forth may be subjected to steam in a tight chamber at 15 pounds pressure and 250° F. for one hour.

D. Honey shall not be salvaged

but drained off with the refuse water. All solid matter (other than wax) remaining shall be burned in an incinerator.

Specifications for all operations are given by the Director of Agriculture.

The Rearing of Stingless Bees (Meliponinae)

First book ever published on the stingless bees, *Meliponids and Trigonids*, is in Portuguese, written by Paulo Nogueira-Neto, who has spent much of his life studying these interesting bees. Full title of the book is "A Criacao De Abelhas Sem Ferrao," and is published by Chacaras & Quintas in Sao Paulo, Brazil. Price, \$3.00.

This is the first of three books that are to be published on stingless bees. Nogueira recommends that these stingless bees be kept in apiaries on farms and enter into the Brazilian agricultural economy. Suggestions of building an apiary, care of the bees, flower pollination, type of hives, and so forth are given.

The author has had many years of study on these bees and is familiar with handling honey bees (*Apis mellifera*). The bees are recommended to be protected during winter by outside casings. There is a 6-page bibliography.

From review by Prof. W. A. Pickens, La. State Univ.)



ABIE STINGS SEZ:

Saw some of those pollination boys slogging through the mud of an orchard today. Their truck was stuck to the axles, and they were walkin' the colonies out to their locations. These same guys used to gripe about that same kind of walkin' in the army—but now they're in business for themselves and they got no tough sergeant tellin' 'em they gotta, so now they wanna. Still, seems like a tough way to make a buck.

Production for 1954 Beeswax and Honey

Final figures reveal the 1954 honey crop as 217 million pounds or about 5% under the 1953 figure but 5% above the November estimates. Heaviest producers are in order: California, Minnesota, Florida, Wisconsin, Iowa, Idaho, Texas, Ohio, Illinois and Michigan. Average per colony was 39.8 pounds per colony as against 40.6 in 1953. Beeswax production is estimated at slightly more than 4 million pounds, just a shade under 1953.

As of Dec. 15 beekeepers still had under purchase agreements some 705 thousand pounds of honey and under loan, slightly in excess of a million pounds.



Secretary Benson

At the 4-H Club Congress in Chicago, Secretary Benson received the first print of the new 4-H motion picture, "The Town that Came Back," from 4-H member Darrell Hoar of Provo, Utah. The film was presented at the Congress, with 1,300 4-H youths attending.

Secretary Benson, answering an inquiry concerning his thinking about bees, from Harriet M. Grace, of American Honey Institute, has this to say:

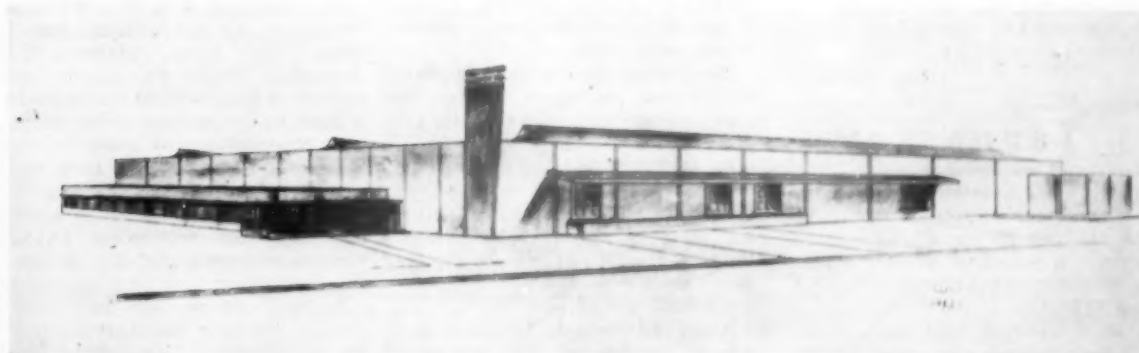
"Everybody knows the honey bee is the only source of our annual crop of more than 250 million pounds of honey and 4 million pounds of beeswax. But too few people realize that the principal role of the honey bee is to pollinate some 50 important agricultural crops so that they will flower

and produce seed. In the past, this essential job was performed primarily by wild insects but under modern farming methods this no longer is possible. We now depend almost entirely on the beekeeping industry to supply honey bees which can be grown in captivity moved from farm to farm and protected from insecticides and the farmer's plow. The beekeeping industry therefore has a basic function of providing one of our most important agricultural tools. It must have our full encouragement including adequate research if it is to carry out this function effectively."

Ezra Taft Benson, Secretary of Agriculture

(Photo from Ford Motor Company)

New Superior Honey Plant



The Superior Honey Company, of Los Angeles, broke ground the last of February for their new plant at 10920 So. Garfield, South Gate, California. The main building is of tilt-up concrete and, with the office, will be over 40,000 square feet. Superior Honey was started in 1900 and is the oldest honey plant west of

the Mississippi in continuous operation. The new plant is probably the largest in the country under one roof devoted to the processing of honey. It is expected that the building will be completed in late June, with dedication ceremonies then or in early July.

Here and There

Illinois

The year 1955 is really making progress and the time is drawing near for us to have a midsummer meeting.

Last year the meeting was a two-day event with a tour the second day and was held in Herrin. It had been several years since the southern Illinois folks had had such a meeting and so the honor was granted them when they asked for the meeting. Possibly a meeting in the northern portion of the state would be in order this year.

Any local Association wishing to sponsor the midsummer meeting, please get in touch with your secretary as now is the time to start planning such a meeting. These meetings are a lot of fun and the 1954 meeting was a humdinger with the grandest tour. Your president, Mr. H. E. Dale, managed the affair. Don't be bashful folks. Write in and let's get going.

National Honey Show

Your secretary has just received word that the National Honey Show will be held at Illinois State Fair in 1955. So you beekeepers who think you have the best honey in the world, get busy! Get your information on this show from Carl E. Killion, 908 Marshall St., Paris, Ill. By the way, the Killions will not be showing and therefore some of you other beekeepers will have a chance to win. Carl was commissioned to try swinging the National show to Springfield and it looks like he was in there pitchin'! He Dooedit!

(Hoyt Taylor)

Tennessee

Resolution:

Tennessee Apiculture (published by the Department of Agriculture) carries a resolution from the state association on the inclusion of teaching apiculture at the University:

Be it resolved, that we, the Tennessee Beekeepers' Association at our annual meeting in Knoxville on October 21 and 22, extend to the University of Tennessee our thanks

for including in the university curriculum a course in beekeeping. We suggest a two-hour course in bees as a biological subject, showing the importance of the bee to agriculture, which would be an elective course open to all students of the University.

We again request that the University of Tennessee employ a person to do educational work with our beekeepers, also that the Experiment Station do some research work as to the value of the bee pollination on some of our major crops; namely, cotton, vetch, crimson clover, and soybeans. We, as taxpayers of Tennessee, will consider this expense money well spent.

—Ralph Ring, Chairman,
Resolutions Committee

Wisconsin

Promotion

From time to time members of the Wisconsin State Beekeepers Association have been asked to promote its various activities. There seems to be a much appreciated little group who are willing to put forth effort and make sacrifices to this end. There is a larger group who have not felt the urge to exert themselves. There is much we can all do.

County Associations should be organized in each of the Districts. All County Association Officers should be members of the State Association. Regular correspondence should be directed to us for publication so that county association activities can be appreciated and the best features shared with others.

Real effort should go into state association committee work. We need help with influence that will get your local legislator to vote for our bills. We need and get workers for our State Fair project. We need, we must have, more attention to enlisting more beekeepers as members. We need the kind of help for Badger Bee that will help the beekeeper—more want ads.

Above all we need criticism, real honest, constructive, heartfelt criticism. We must find ways to do the good jobs better, prevent mistakes and to serve more people. If there

happened to be a foot-dragging, quarrelsome, critical group we could use them too. If we could overlook their negative attitude we would be that much stronger. (Badger Bee)

Southern Wisconsin District

The Southern Wisconsin District Association held its spring meeting in the Gideon Room of Janesville, Wis., Y.M.C.A. on Saturday, March 12. This district comprises the counties of Columbia, Dane, Green, Iowa, Jefferson, Lafayette, Rock and Walworth.

The meeting was called to order at 10:00 A.M. by Pres. Marcus Osborne and a report was received from the various beekeepers present on the condition of their colonies after wintering. Based on these reports, it appeared that losses had been quite heavy throughout southern Wisconsin, due perhaps to the lack of a good fall flow of goldenrod honey in 1954.

Beekeepers in attendance at the American Federation meeting in Chicago in January told of their experiences there and of some of the new developments discussed at the meeting. Mr. John Long, chief of the Bee and Honey Section, Wis. Dept. of Agric., discussed the latest developments in the use of sulfathiazole in the control of AFB throughout the country.

The afternoon session was devoted mainly to a panel discussion on the subject of section comb honey production. John Long acted as moderator and a very informative and worth-while program resulted from the contributions offered by members of the audience, on various management techniques and handling procedures for obtaining maximum production and high-quality sections. Participating in the panel were comb honey producers William Judd, Stoughton, Wis., Ivan Whiting, Roscoe, Ill., Donald Williams, Beloit, Wis., Wilbur Mong, Belvidere, Ill., Norman R. Harper who has the distinction of having taken second place in comb honey displays at the American National Honey Show at the Minnesota State Fair in 1954, and other members of the audience.

Mr. Art Kehl, of the G. B. Lewis Co., gave an interesting talk, "Trends in Beekeeping" and on honey sales.

Elected officers for 1955 were Donald Williams, Beloit, Pres.; Bernie E. Gerstner, Lake Mills, Vice Pres.; and Stanley J. Otis, Madison, Sec'y-Treas.

S. J. Otis, Sec'y-Treas.

Colorado

CHAC Votes to Continue 10 Cents a Can Assessment

The Colorado Honey Administrative Committee met January 17 at the Colorado Department of Agriculture to plan their activities for 1955. The assessment will remain at 10 cents a can. Five cents will be spent on advertising and promotion, 3.5 cents on administrative expenses, and 1.5 cents will be given to the Colorado Agricultural Research Foundation for research on beekeeping problems. As in the past, much of the money allotted for administrative expenses probably will be spent on promotional activities.

Otto Pfretzschner was re-hired as manager. The possibility of submitting some new provisions to a referendum of beekeepers was discussed. One change in the law which was discussed was placing an assessment on all honey packed in Colorado.

CHAC to Send Questionnaire to all Beekeepers

The Colorado Honey Administrative Committee has prepared a questionnaire to be sent to all Colorado beekeepers. CHAC sincerely wants to have your ideas and suggestions for improving the work of the committee. Some of you have very strong opinions on the weaknesses of CHAC. Here is your chance to give your ideas. All replies will be given careful consideration. Also, tell what features of CHAC you want retained when you answer the questionnaire.

Ohio

1955 October Honey Week and Queen Plans

While there are many kinds of weeks, "HONEY WEEK" is our week. In 1953 a very few in OHIO helped. In 1954 more folks helped, and Our Honey Queen helped to Promote HONEY during "OCTOBER HONEY WEEK"—by touring

the state and appearing on television and radio programs. "OCTOBER" Honey Week for '55 is being planned now. County Association Presidents, Secretaries and Beekeepers—WILL YOU HELP in making our 1955 October Honey Week a real success? Will you write now and volunteer to help? Aids for news releases and radio and television aids will be sent you to help in your local program. Write 1733 Sunset Avenue, Springfield, Ohio.

It is planned to choose a REGIONAL QUEEN and Alternate during the evening session of the Canton, Ohio, meeting in July. Another Regional Queen and Alternate will be chosen during the afternoon session of the Middletown meeting. The queens and alternates, as selected, will compete during the evening session of the Middletown meeting for OHIO'S '55 Honey Queen and Alternate.

Another expense fund for the 1955 Queen is started—Will you join with those who helped in '54, to make the '55 QUEEN promotion another tremendous success?

Michigan

Executive Committee of State Association:

Russell Kely, 2708 E. Grand River, East Lansing, president; Kenneth Atkinson, 2826 Ivanrest S.E., Grandville, vice president; Margaret Seidelman, Route 3, Ionia, secretary; Ottomar H. Roth, Reese, treasurer.

Kenneth Farner, 1206 W. Reid Rd., Flint 7, District No. 1; Wallace Godfrey, Jonesville, District No. 2; Howard Schmidt, Fillion, District No. 3; Walter Edwards, Jr., Mesick, District No. 4; A. B. C. Woodman, 234 Scribner, Grand Rapids 4, Member-at-large.

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100-up 1.00	3.00	3.90	4.80

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Quantity	1-24	25-100	101 up
2-lb. pkg.	\$3.25	\$3.00	\$2.80
3-lb. pkg.	4.00	3.75	3.50
4-lb. pkg.	4.75	4.40	4.25
5-lb. pkg.	5.50	5.25	5.00
QUEENS75	.75	.65

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Quantity	Queens	2-lb. Pkg. W.Q.	3-lb. Pkg. W.Q.	4-lb. Pkg. W.Q.
1-24	\$1.25	\$3.50	\$4.40	\$5.40
25-99	1.15	3.35	4.25	5.25
100-up	1.10	3.25	4.15	5.15

BESSONET BEE COMPANY

Donaldsonville, La.

Bees Are My Business . . .

A dyed-in-the-wool commercial beekeeper, Harry J. Whitcombe, in collaboration with John Scott Douglass, also a beekeeper, and a writer, has given us the life story of his climb from a small boyhood start to his present place as one of our largest crop pollinators. Although he struggled for years in honey production and in the production of queen bees and package bees, it is his pollination efforts and his contributions to our understanding of what is involved in pollination that will engrave his name on the roster of our great moderns for a long time.

"Bees Are My Business" is published by G. P. Putnam's Sons whose wisdom in book publishing adds its mantle to our assurance that here is something worth reading. Indeed it is. It is like a novel, with romance, disappointments, exultation, and wise philosophy, yet intensely practical; full of what any beekeeper should know.

It also places beekeeping on a modern level; the kind of beekeeping that we must know about or we soon get out of step. The top story of his pollination is his 1,000 pound per acre seed crop of alfalfa, in the face of a state average of 220 pounds! This experiment, in collaboration with scientists and growers, will long remain to challenge others.

"Bees Are My Business" is a 245-page, cloth bound book, with splendid illustrations. If you wish a copy, we can furnish you one for \$3.75.

Pollen Studies . . .

Mr. J. Louveaux writes in December 1954 issue of "L' Apiculteur" of his studies on pollen. Mistletoe is visited by some colonies. Fruit trees are pretty generally frequented, but some colonies locate plants easily while others only after some time. Meteorologically, a change in the weather can radically change pollen collecting within 24 hours. Under 10 degrees C there is no collection, the optimum being at 25 degrees C. Perhaps due to greater opening of flowers the day following an inclement day seems to be tops for pollen. Any brood in a hive is immediately reflected in the amount of pollen collected.



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American Bee Journal

Hamilton, Illinois
Agent for U. S. A. and Canada

LIGHT ITALIANS

This may be the year we have been waiting for. Anyhow, empty hives won't make a profit.

Write for attractive prices.

Sunrise Apiaries

Box 166, Petal, Miss.

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A Sample Copy

"Gleanings in Bee Culture"

LOOK IT OVER

YOU WILL LIKE IT

A. I. ROOT CO., Medina, Ohio

WILLIAMS ITALIAN QUEENS

Large Leather-Colored Three-Banded
QUALITY SUPREME

Certificate with each shipment

1-9 Air Mail \$1.00 Each

10-99 Air Mail55 Each

100 Up Air Mail50 Each

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115 W. Sterling St. Baytown, Texas

CANADIAN BEE JOURNAL

Canadian beekeepers have much in common with their neighbors in the U.S. If you are interested in bee activities "North of the Border," send us your subscription NOW. Subscription price, \$1.75 per year in U.S.A.

Canadian Bee Journal

Streetsville, Ontario, Canada

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THREE-BANDED ITALIAN PACKAGE BEES AND QUEENS

Shipped Anywhere in United States and Canada

1955 Prices	Queens	2-lb. &	3-lb. &	4-lb. &	5-lb. &
F.O.B. Hampton, S. C. (each)	queen	queen	queen	queen	queen
1-24	\$1.10	\$3.50	\$4.50	\$5.50	\$6.50
25-99	1.00	3.25	4.25	5.25	6.25
100 up	.95	3.00	4.00	5.00	6.00

(For queenless packages deduct price of queen)

Guaranteed safe arrival

Health Certificate with each shipment

Queens clipped and painted if desired

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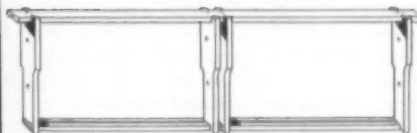
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New Comb Honey Frame



This is a frame that you saw apart, wrap the comb honey in cellophane and sell in trays. Half of 5 3/8" frames weigh 1 1/2 to

2 pounds. Half of 4 1/2" frames weigh 1 to 1 1/2 pounds. These handy sized packages can be priced low and still return more net profit than sections because production will be so much greater. Write for our big, free 64-page catalog which lists these and other new items.

WALTER T. KELLEY CO.

Clarkson, Ky.

Weaver's Caucasian Bees and Queens

OUR PRICES WITH NEW CAGES —

	Queens	2-lb. w/q	3-lb. w/q
1 to 9	\$1.25	\$3.50	\$4.50
10 to 48	1.15	3.40	4.40
49 to 100	1.05	3.25	4.25

Prompt Shipment

Young Laying Queens—Full Weight—Young Bees. Health certificate with each order. Deduct 20 cents a package for bees in clean used cages.

Shipments made by express, parcel post, or your truck by prearrangement.

For further information write us.

HOWARD WEAVER

Navasota, Texas

ITALIAN

Package Bees and Queens for 1955

	1-lb.	12 or More
2-lb. pkg. with Queen	\$3.25 each	\$3.00 each
3-lb. pkg. with Queen	4.25 each	4.00 each

Live delivery guaranteed.

GIRARDEAU APIARIES

Tifton, Ga.

MEETINGS

Two Beekeeping Short Courses To Be Offered at Penn State University This Summer

The two short courses in beekeeping to be conducted at Penn State will consist of a course on queen rearing to be given June 20, 21, and 22, and the regular short course to be taught during the week of August 22 and 26, 1955. Both courses begin on a Monday.

The Queen Rearing Course

The program for this three day course is given below. It will be noted that one half day will be spent visiting the apiary of J. B. Hollopeter at Rockton, Penn., to observe his method of rearing queens. Mr. Hollopeter has spent most of his life as a queen breeder and knows many tricks of the trade and short cuts common to queen rearing. The rest of the three days will be divided between lectures in the morning and work in the bee yards each afternoon. Each student will be given an opportunity to do some grafting and the other phases of queen rearing in the apiaries. The course is going to be made as practical as possible.

The cost of this course is \$5.50 for residents of Pennsylvania and \$10.50 for beekeepers from other states. This course will be limited to a maximum of 20 students. If more than 20 register, the first 20 to do so will be accepted. The limit of 20 students is placed on the course because of the nature of the demonstrations where only 10 students can be supervised by one instructor at a time. The number of queen rearing colonies available is also a limiting factor. It would not be fair to those attending to accept a larger number.

The Regular Beekeeping Short Course

The regular short course on beekeeping will be given the week following the State Meeting and Picnic in York County or during the week of August 22-26. This course will again consist of a complete series of lectures each morning of the week and an equally complete series of demonstrations in the University apiaries and laboratories each afternoon. There will be an addition this

year to the demonstrations in the laboratory, candy making and the dipping of candy centers in chocolate will be demonstrated during one or two days of the week.

The subjects covered in the lectures will consist of:

- The Secrets of the Hive
- Seasonal Management
- Swarm Control
- Wintering of Bees
- Disease Control
- Queen Rearing
- Marketing and others

The demonstrations will include:

- Swarm Control
- Removing honey from the bees
- Queen rearing
- Transferring bees from box to modern hives
- Extracting honey
- Care of beeswax
- Making honey candy and others

The number who may attend this course is not limited. The cost is \$7.50 for residents of Pennsylvania and \$12.50 for students from other states. To register for either course write to D. R. McClay, 203 Dairy Bldg., State College, Penn. (University Park).

Middlesex County (Mass.) - April 30

The "Middlesex County Beekeepers' Association (Mass.," will hold its final indoor meeting of the spring season on Saturday, April 30, 1955, at 6:30 P.M. The meeting will be held at the Massachusetts Experimental Field Station in Waltham.

At this meeting the Association will install a package of Italian honey bees in a new hive. This hive will become the "Club Hive" and will be taken to each outdoor meeting during the spring and summer months, and the progress of the hive will be noted at each meeting. At the end of the season in September the hive will be given to some lucky member. The "Club Hive" is watched with interest all summer by all the members, and is of great help to new beekeepers who can compare the progress of their own hives with that of the "Club Hive."

L. C. Proctor

Midwestern (Missouri) - April 17

The April meeting of Midwestern Beekeepers Assn. will be held at Jackson County Courthouse, Independence, Missouri, on April 17 at 2:30 p.m.

Mrs. William Brite

New Hampshire - April 5

As one of our series of 5 garden meetings being held by the Hillsboro County Extension Service, we are going to have a session on Beekeeping.

Prof. J. R. Hepler, U N H Extension Horticulturist, will discuss "Beekeeping for Beginners" and Henry Holt, bee supply man from Manchester will discuss "Supplies Needed to get Started With Bees."

The meeting will be held in the Milford Community House, Milford, N. H., on April 5 at 8 P.M.

We hope to interest more people in keeping bees to pollinize fruits and vegetables and to break down some of the fears often associated with bees.

Perley D. Colby

Rhode Island - April 30

Annual meeting R. I. Beekeepers' Association Saturday, April 30, 1955 at 6:30 p.m. Plymouth-Union Congregational Church, 1014 Broad Street, Providence. Speaker Mrs. M. Louise Yates.

Arkansas Valley - May 15

The ARK VALLEY BEEKEEPERS ASSOCIATION will hold the next regular meeting on May 15, starting 1:00 p.m., at the home of The Webb Apiaries, Route 4, Winfield, Kansas (located 9 miles east of Winfield on U.S. 160 and K-15 highways, then 2 miles north.) The program will include a guest speaker and, for the out-door portion, a demonstration of proper hive inspection plus the installation of a package of bees. Refreshments of sandwiches and coffee are to be served at the close of the program. Anyone interested in bee culture is cordially invited to attend.

Mrs. Emory R. Webb, Secretary

Wisconsin District Meetings

April 12. Western District meeting at Sparta, 8 p.m. in court house.

April 13. North-Central District meeting. Community Service Center, Marshfield Experiment Station. County trunk T, 2½ miles east of Marshfield.

April 14. Fox River Valley District. City Hall, Appleton.

April 28. N.W. District meeting.

April 29. Northern District meeting, in High School, Poplar, Wis.

Iowa Short Course - May 10 and 11

The 35th Annual Short Course for Iowa Beekeepers will be offered by Iowa State College on May 10 and 11. The sessions will be held as usual in the Memorial Union. Professor E. C. Martin, of Michigan State College, will be the guest speaker.

National Honey Show in Illinois

The National Honey Show which has been held for several years at St. Paul is to be held this year in connection with the Illinois State Fair at Springfield, Illinois under the auspices of Mr. Carl E. Killion, Chief Apiarist for the state. We understand that Killion will not exhibit his comb honey this year, due to his connection with the show.

We assume that points on exhibits will be about as last year in Minnesota, and that premiums will be the equal of those given formerly. No doubt Killion will do as outstanding a job as has C. D. Floyd in Minnesota. We urge our interested readers to begin preparing for the big show in latter August.

May Meeting of New Jersey Beekeepers' Association

May 21, 1955

Log Cabin, Experiment Station, New Brunswick, N. J.

9:30—Get Acquainted Period.

10:00—Bee Movie.

10:30—Important Announcement.

10:45—Frame Wiring and Foundation Embedding Demonstration.

11:15—Installation of Package in Experiment Station Apiary (This colony will again be checked at the July meeting).

12:00—Lunch.

1:30—Speaker of the Day to be Announced.

2:00—Forum on Swarm Control.

2:30—Visit to the Experiment Station Bee Yard.

Milton H. Stricker, Sec.

April, 1955



JENSEN says,—



BEE U.S. PAT. OFF.

Copious rains came during winter just passed, and spring has blossomed forth anew. Our hopes have been more than met in one of the most favorable spring seasons within our memory. Bees have responded gloriously to manipulations and we know our Faith in Providence has been justified again.

The influx of advance orders is gratifying, and a healthy sign for the future of beekeeping as an industry. We are doing our utmost to meet the challenge of the evident trend by expanded facilities, and efficiency.

Special Introductory Offer: On all orders for "Magnolia State" Queens we will substitute 10 Dadant "Starline" Hybrids, or 10% of order whichever is least, at the price of Magnolias. Clipped and Marked Free. Fumidil-B fed.

	Queens "Starline" Hybrids	Queens "Magnolias"	Italian 2-lb. Pkgs. W/Qs	Italian 3-lb. Pkgs. W/Qs
1-34	\$1.50	\$1.25	\$3.75	\$4.75
25-99	1.40	1.15	3.50	4.50
100-up	1.30	1.05	3.25	4.25

For Starline Hybrid Queens in packages, add 25c to each.

JENSEN'S APIARIES

Macon, Miss., U.S.A.

The MASTER (formerly Macy)



For fast uncapping use a MASTER Electric Uncapping Knife. Built for long, dependable service.

Your dealer stocks them.
Price, \$14.25

HUTCHISON MFG. CO.

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EARLY QUEENS AND PACKAGES

Do you have trouble getting queens early in the season? We begin shipping our regular stock on March 20 and Starline stock on April 1. Write for prices.



J. M. CUTTS & SONS

Box No. 336

Chipley, Florida

Better Bred Queens

Three Banded Italians

Frame after frame of smooth, even brood; super after super of honey; gentle bees; swarming cut to minimum. This is what you get when buying our Better-bred Stock. Plenty of bees ready for April 1st shipment. Order direct from this ad at the following prices:

	Queens	2 lb. w/q	3 lb. w/q
1 to 18	\$1.15	\$3.25	\$4.15
18 to 99	1.05	3.10	4.05
99 or more	1.00	3.00	4.00

CALVERT APIARIES

CALVERT, ALABAMA



Caucasian
and
Carniolan



Start the New Year with young queens and be assured of plenty of bees when honeyflow starts. Caucasians or Carniolans build up rapidly, build white combs and are gentler of all races of bees. Untested queens \$1.20 each, Foreign \$1.50 each—discount on quantity.

Order early to be sure of queens when needed. Queens ready Mar. 10.

W. D. REAMS

Box 87 LaBelle, Florida

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AMERICAN BEE JOURNAL

HARPER'S FAMOUS

High Quality Italian

Queens and Package Bees

Lots of	2-lbs.	3-lbs.	4-lbs.	5-lbs.
1 to 11	\$3.85	\$4.25	\$5.15	\$5.95
12 & Up	3.00	4.00	4.85	5.00

Queens—1 to 11, \$1.10; 12 & Up, \$1 ea.

All Queens sent Air Mail. Package Bees sent Express Collect or Parcel Post when Prepaid by customer. Parcel Post is Much cheaper and has proven to be very satisfactory. Live Arrival Guaranteed. Please send orders in early.

CARLUS T. HARPER

New Brockton, Ala.

Bees and Queens

Send for FREE Circulars

Booking orders now.

Over 30 years a shipper.

Blue Bonnet Apiaries

Weslaco, Texas

ITALIAN QUEENS

\$1.20, Each (up to 51)

In larger lots, write for prices.

Queens raised from heavy-producing stock.

BEES—2-lbs.—\$3.50
3-lbs.—\$4.50

Health Certificate.

What have you to trade?

Homer W. Richard

1411 Champagnolle St., El Dorado, Ark.

Italian Queens 75c Each

Air Mail and Guaranteed
to Please

O. K. Anderson & Son

Box 193 Coffee Springs, Ala.

Editorial

What about Honey Price Stabilization Programs?

In the Agricultural Act of 1949, extracted honey was designated a nonbasic commodity to be supported at 60 to 90 per cent of parity. This was done by a Congress who had been convinced that honey bees were vital to our agricultural economy through the pollination of more than fifty food and seed crops. Congress made price support for honey mandatory because they felt it necessary to help maintain a prosperous beekeeping industry. In addition to carrying out the mandate of Congress, the U. S. Department of Agriculture further helped by establishing subsidy programs for export and diversion. What has been some of the results of these price stabilization programs?

When Congress acted in 1949, extracted honey at wholesale averaged 11.1 cents per pound. From a high of 22 cents per pound at the peak of prices during World War II, extracted honey had dropped to 13.7 cents in 1948 and to 11.1 cents per pound in 1949 as sugar rationing ceased and honey no longer was in great demand.

What has happened to the average price at wholesale for extracted honey since 1949? In 1950 the average price advanced to 11.6 cents per pound, to 11.9 cents in 1951, to 12.6 cents in 1952, to 12.9 cents in 1953, and to 13.2 cents per pound in 1954. The price for extracted honey has been stable and has been gradually advancing since 1949. Comb honey prices have followed the same steady trend going from a low of 28.1 cents per pound in 1949 to 30.2 cents in 1954. What did the size of the crop have to do with this stabilized upward trend? That is difficult to measure but we can say that the exceptionally large crops of 1951 and 1952 did not alter the trend. And while we are talking of factors which have influenced the price of honey, we want to make it clear that stabilization programs were not the only factors affecting the price, but we believe they did effect stabilization and may have influenced the upward price trend.

But regardless of what have been the factors causing this steady advance in the average wholesale price of extracted honey, we pause to ask ourselves, "What have these price increases meant in the way of additional income to producers?"

Using the average wholesale price of 1949 as a base, and multiplying the total honey crops of 1950 through 1954 by the price difference for those years over that of 1949, and adding up those results, we find that the additional income to honey producers amounts to \$15,924,754—an average of \$3,184,951 per year. Phenomenal! Isn't it?

So then we wonder, "What did it cost the Government?" Frankly, we have no way of knowing because this involves administrative expenses, storage, freight costs, and many other factors for which we do not have figures let alone ideas about. However, a recent bulletin on price programs of the Government in a table of net realized gains and losses of the Commodity Credit Corporation on the price-support program, by commodities, from July 1, 1950 through June 30, 1954, shows a net gain for honey amounting to \$12,344. Of the designated nonbasic commodities (butter, cheese, dried milk, honey, Irish potatoes, tung oil, and wool) only tung oil and honey showed a net gain while the total for the group was a net loss amounting to \$311,813,400. Phenomenal again! Isn't it? You haven't heard anything yet! The price support program for all 32 commodities listed showed a net loss amounting to \$893,573,562.

We report the above not as a justification for whatever amount the honey stabilization program is costing the Government, but as a comparison which we believe indicates that the cost of honey price stabilization programs is very minor to that of other price programs in effect. And we contend that these programs have been highly beneficial to the beekeeping industry through stabilizing the price of honey if not affecting its upward price trend.



Leak-Proof DeLuxe Model
Priced at \$2.10
Plus Shipping fee on 2 lbs., 11 oz.
Honey Flow Co.
316 W. 3rd St. So. Newton 1, Iowa

BEE SUPPLIES

Finest Quality
Reasonably Priced

Try Our Prompt Service

A. H. Rusch & Son Co.
Reedsville, Wis.

Gentle Italian
Package Bees and Queens
Winfield Gear Apiaries
Tehama, California
Member Calif. Bee Breeder Assn.

Palmetto Quality Queens

Large three band Italians that deliver the honey. Thirty-three years' experience is our guarantee of Quality.
Prices: 1 to 10, 95c ea.; 2 to 25, 90c ea.

No disease. Live delivery.

C. G. Ellison & Son

Phone 5141 Belton, S. C.

GOOD ITALIANS

\$1.00 Each

WHITE PINE BEE FARMS

Box 800 Rockton, Penna.



"Originators of Frame-Grips"

Send now to **McCord Mfg. Co.**
Rt. 2, Box 966, San Jose, Calif.

Positive Grip Through the Leverage Action of This Strong Aluminum Frame-Grip.

Also obtainable from your leading Bee Dealer. Don't accept a substitute.

DeLuxe - 2.75
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Plus 25c postage fee.

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Three-Band Italian Package BEES AND QUEENS and Pure Italian Three-way D. R. Queens

Full weight, prompt shipment. Young bees. State health certificate with each shipment. Live arrival guaranteed.

We ship by mail or express.

1955 PRICES WITH YOUNG LAYING QUEENS

Lots of	2-lb.	3-lb.	4-lb.	5-lb.
1 to 25	\$3.85	\$4.00	\$4.75	\$5.50
30 to 100	3.00	3.75	4.50	5.25
100 up, each	2.80	3.50	4.25	5.00

Tested queens, \$3.00 each

Untested queens, \$1.00 each.

For introduced queen add \$1.00 per package. If queenless bees are wanted deduct \$1.00 from the package price.

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Funston, Georgia, U.S.A.

BEE SUPPLIES

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One-Piece Covers and Bottoms

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DARK ITALIANS

As Good as the Best

Prices	Queens	2-lb. Pkgs.	3-lb. Pkgs.
1 to 10	\$1.20	\$3.75	\$4.75
11 to 50	1.10	3.50	4.50
51 and up	1.05	3.25	4.25

We are booked to April 20th. Prompt shipment after that date.

WEAVER APIARIES

Navasota, Texas

A commercial shipper for 28 years.

THREE BANDED ITALIAN BEES AND QUEENS

	Queens	2-lb. w/q	3-lb. w/q
1-24	\$1.00	\$3.00	\$4.00
25-99	.90	2.85	3.85
100-up	.75	2.75	3.75

For queenless package deduct price of queen.

Shipments made by parcel post or express.

LUCEDALE APIARIES

Lucedale, Miss.

ITALIAN PACKAGE BEES AND QUEENS

Quantity (packages)	2-lb. with Queen	3-lb. with Queen	4-lb. with Queen
1-24	\$3.50 ea.	\$4.50 ea.	\$5.50 ea.
25-99	3.25	4.25	5.25
100 up	3.00	4.00	5.00
QUEENS: 1-24	\$1.10	25 or more	\$1.00

GOLD LEAF APIARIES

Box 252

HAHIRA, GA.

The Market Place . . .

BEES AND QUEENS

CARNIOLAN and CAUCASIAN package bees—2-lb. pkg., \$3.00; 3-lb. pkg., \$4.00. Untested queens, \$1.00 each; 100 queens, \$75.00. Tillery Bros., Greenville, Ala.

CAUCASIANS—Very hardy, gentle, long lived, good workers. Personally raised laying queens, \$1.10 each. Ready about April 15. Fred Brock, McDonald, Tenn.

GOLDEN ITALIAN QUEENS—Bees are very large and gentle, and heavy honey producers. Price 90c each. Guaranteed live arrival and health certificate. Allen H. Gauthier, Hamburg, La.

DARK ITALIAN QUEENS—600-lb. strain, bred for production, \$1.00. With 2-lbs. of bees, \$2.85; with 3-lbs. of bees, \$3.70. Henry Loehr, Caldwell, Texas.

PACKAGE BEES—Take a vacation on your express money. Come for your bees; be our guest while here. 1800 flies to shake. Booking orders now. Write Miller Bros., Safford, Ala.

GOLDEN ITALIAN QUEENS that produce large gentle bees, excellent honey producers. Price \$1.00 each. Live arrival and health certificate guaranteed. Alvin J. Ducote, Hamburg, La.

ITALIAN QUEENS—\$1.25 postpaid. 2-lb. bees and queen, \$4.25; 3-lb., \$5, express collect. Dadant Starline Hybrids (The Wonder Workers), 25c per queen additional. Parcel Post, add postage for 6-lb., 7-lb. S. J. Head, Crossett, Ark.

ITALIANS—Package queens. Martz, Rt. A2, Box 846, Vacaville, Calif.

CAUCASIAN BEES and QUEENS—Real workers and very gentle. Select untested queens, 1 to 25, \$1.25; 25 to 100, \$1.10; 100 up, \$1.00. Package bees—2-lb. package with queen, \$3.50; 3-lb. with queen, \$4.50. Health certificate with every order. Black River Apiaries, Currie, N. C.

BRING OR SEND shipping cages. Will supply bees after May 15, small lots 75c lb., volume lots 65c lb. Queen with packages 90c. A. V. Dowling, Valdosta, Ga.

LIGHT 3-BAND Italian bees and queens—3 pounds with queen, \$4.70; 5 pounds, \$6.70. Shipped prepaid. Queens, \$1.00. Luther Pickett, Effland, N. C.

GOLDEN ITALIAN bees and queens—Real beautiful and very gentle. Untested queens, 1 to 25, \$1.20; 25 to 100, \$1.10; 100 up, \$1.00 each. 2-lb. package with queen, \$3.50; 3-lb. with queen, \$4.50. Satisfaction guaranteed. Carolina Bee Farm, Graham, N. C.

FOR SALE

THIRTY COLONIES BEES—Fully equipped, ten-frame, disease unknown. Honey tank, automatic sling. Charles Thompson, Rt. 3, Falmouth, Ky.

FOR SALE—Eight and ten frame hive bodies, with frames, one dollar each. Comb honey supers, inner and outer covers, fifty cents each. Newly wired frames, \$8 per hundred. Twin screw wax press, \$10. Nothing shipped. H. G. Quirin, 400 South West St., Bellevue, Ohio.

FOR SALE—8-frame Root equipment for 700 colony apiary. Write for details. E. H. Wadleigh, Monte Vista, Colo.

FOR SALE—12-frame power extractor; 4-frame basket extractor; 80 cases new 2-lb. honey jars and lids by dozens; 80 cases new 1-lb. honey jars and lids by 24 each; 60 bottoms and 90 lids for std. 10-frame boxes. G. A. Whitney, 927 Oxford Drive, Emporia, Kans.

500 COLONIES of bees and all equipment. honey house, modern home. Or bees without home or honey house. Would rent honey house. J. T. Camp, Hot Springs, Mont.

Copy for this department must reach us not later than the tenth of each month preceding date of issue. If intended for classified department it should be so stated when advertisement is sent.

Rate of Classified advertising—13 cents for each word, letter, figure or initial, including the name and address. Minimum ad. ten words.

As a measure of precaution to our readers we require reference of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisers offering used equipment or bees on comb must guarantee them free from disease or certificate of inspection from authorized inspector. The conditions should be stated to insure that buyer is fully informed.

100 ten-frame colonies, state certified Italians, in excellent condition. A. V. Dowling, Valdosta, Ga.

100 three-story, eight-frame colonies, \$10. 200 two-story, 10-frame colonies, \$10. 200 new Diamond 10-fr. supers, painted, with foundation. Lifetime eight-frame extractor, nearly new; pump; tanks; motors; misc. Troy Nance, 3764 Jeffrey Ave., Sacramento, Calif.

FOR SALE—Used bee supplies. 150 deep 10-fr. brood chambers, 250 Langstroth 10-fr. extracting supers, 250 shallow 10-fr. extracting supers, 100 shallow supers for cut comb honey. All clean and in good condition. Write for low prices. I. W. Mundhenke, East Dubuque, Ill.

MY ENTIRE BEE BUSINESS of 400 colonies for sale in one unit. Wm. Kruse, Godfrey, Ill.

TWO HONEY MIXING and STORAGE TANKS. Closed, double jacketed enamel lined with agitator. 1,200 and 5,000 pound capacity. A. I. Root Company, Council Bluffs, Iowa.

FOR SALE—About 85 colonies of bees in 2-story 10-frame hives with some last season's surplus honey and extra equipment. Willis McKee, Warren, Ill.

SEVERAL GOOD 20-frame Root extractors. Lyon Bros., Anthon, Iowa.

FOR SALE—1 3-frame, 1 4-frame extractor. Price right. M. Kinsman, Rt. No. 1, Kankakee, Ill.

FOR SALE—10 colonies bees, standard hives, extra supers, supplies. Wm. Johnson, 502 W. Locust St., Polo, Ill.

40 3-story, 10-fr. hives bees at \$10.00 each. Fred J. Kessler, 903 N. Water St., Wauertown, Wis.

FOR SALE—100 or more 10-frame supers for comb honey, complete. Frank C. Brown, Rt. 2, Yorkville, Ill.

HONEY AND BEESWAX WANTED

WANTED—Light amber to dark honeys for cash. Send price, etc. Any quantity. R. Griggs, Hancock, Iowa.

WE ARE PAYING top prices on beeswax and honey shipped to one of our plants. Sioux Honey Assn., Lima, Ohio; Rogers, Texas; Anaheim, Calif.; Tacoma, Wash.; and Sioux City, Iowa.

HONEY WANTED—We pay cash. Tideswell Supply Co., 2711 No. 63 St., Omaha, Nebr.

HONEY WANTED—In 60's. Send sample, state price. J. Wolosevich, 7441 So. Peoria St., Chicago 21, Ill.

WANTED—Honey and beeswax. State what you have and price. Roscoe F. Wixson, Dundee, N. Y.

HONEY LABELS

Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.

C. W. AEPPLER COMPANY

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SMARTWEED honey wanted. Rocke Apiaries, Eureka, Ill.

HONEY WANTED—Extra white, white and light amber, in 60's. Send sample and quote price. Cash paid. Clearbrook Honey Farms, Clearbrook, Minn.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & COMPANY, 2613 South Yates Ave., Los Angeles 22, Calif.

HONEY AND BEESWAX WANTED in trade for supplies or cash. Hodgson Bee Supplies Ltd., 565—13th Ave., New Westminster, B. C., Canada.

HONEY WANTED—Highest prices paid. Submit samples in each grade. Schultz Honey Farms, Ripon, Wis.

CASH PAID for white and amber extracted honey. Send samples and state quantity available. Prairie View Honey Co., 12303 Twelfth St., Detroit 6, Mich.

WANTED—Honey, amber or light, in any amount. Send sample for prices. Holland Honey Cake Co., Holland, Mich.

WANTED—Extra white and light amber honey. Let us ship you the containers. Sell us your honey for CASH on delivery. The Hubbard Apiaries, Manufacturers of Bee Supplies and Comb Foundation. Onsted, Michigan.

WRITE FOR SHIPPING TAGS and current quotations on rendered beeswax. Any amount from one pound up bought. If you have 25 pounds or more, save 25% by letting us work it into foundation for you. Walter T. Kelley Co., Clarkson, Kentucky.

HONEY FOR SALE

100 cans clover honey in new cans, 20c pound. Cash and carry. Busy Bee Farm, Rochester, Mich.

FANCY GRADE galberry tupelo chunk comb—5 lbs., \$7.00; 2½ lbs., \$7.50. Volume discounts. Valdosta Honey Co., Valdosta, Ga.

WHITE CLOVER HONEY in sixties. Ralph Gamber, 910 State, Lancaster, Pa.

POSITIONS and HELP WANTED

WANTED—Year around man with some experience for queen rearing in Texas during winter months, and for honey production in Minnesota during summer. Geo. Gensner, 906 N. 17th St., McAllen, Texas.

WANTED—College student would like summer job with commercial producer. Have had one summer's experience. Good physique, no bad habits, willing to work. Recommendations. Available June 15 to Sept. 15. Address T. R. c/o American Bee Journal, Hamilton, Ill.

IMMEDIATE OPENINGS for experienced and inexperienced help. Stewart Apiaries, Fairfax, Mo.

WANTED—2 men in our apiaries and packing plant. Experience not essential. Good wages, bonus, other benefits. Schultz Honey Farms, Ripon, Wis.

SUPPLIES

THE BIGGEST BEE SUPPLY CATALOGUE PUBLISHED (64 pages) free for the asking. Big factory manufacturing a complete line of wooden goods, comb foundation, metal goods, veils and gloves, carloads in stock, daily shipments, save 20%. WALTER T. KELLEY CO., CLARKSON, KENTUCKY.

NOW READY—Your copy of the **BIGGEST MONEY SAVING CATALOG** of quality bee supplies at savings up to 25%. Prompt shipment—100% satisfaction guaranteed. **WRITE TODAY!** Mondeng Mfg. Co., Minneapolis 5, Minn.

WRITE FOR CATALOGUE. Quality bee supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

WANTED

CASH for bees or standard equipment, California or Western States. Troy Nance, 3764 Jeffrey Ave., Sacramento, Calif.

WANTED—400 colonies bees, complete with supers. Purchase or lease. Norman Roos, Hawley, Minn.

WANTED—Canadian or O.A.C. Honey Strainer. Will pay cash. Must be in good condition. S. D. Williams, 5205 S.E. 82nd Ave., Portland, Ore.

SEEDS AND TREES

HONEY PLANTS our specialty. Catalogue on request. Pellett Gardens, Atlantic, Iowa.

We will pay
20 cents for 8 - 9 oz.
of your honey in our plastic container. Write for details
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P.O. Box 214 Dearborn 1, Mich.



Beekeepers say it's the best frame type feeder on the market.

Send name and address for free illustrated folder.

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Select **QUEENS** Italians
Package Bees
M. C. WEST
Route 1, Box 279-A
Winters, California

Italian Queens

1 to 9 \$1.25 each
10 to 24 1.10 each
25 or more 1.00 each

John S. Shackelford
Rio Oso, Calif.

MISCELLANEOUS

SECTION COMB HONEY production steps—\$1.00. Comb Honey Production Glossary—50c. United Industries, Dept. K, Box 449, Madison 1, Wis.

RANCH MAGAZINE—Do you find it difficult to secure information about sheep and sheep ranching methods? The **SHEEP AND GOAT RAISER** reaches more shepherds with more information of range sheep than any magazine published. Subscription \$1.00. Hotel Cactus, San Angelo, Texas.

BEES removed from house or tree to hive without touching either house or bees. Bees will then move honey into hive. Save property, honey and bees with my method. Send \$2 for details. Satisfaction guaranteed. George Hawkins, Rt. 1, Lawson, Mo.

KNOW interesting facts about the bees of India through the **INDIAN BEE JOURNAL**, published in English by the Bhupen Apiaries (Himalayas), Ramgarh, Dist. Nainital, U.P., India, and obtainable from them. Subs. Rs9/-, or \$1.15/-, or \$2.25 yearly. Sample copy, post free, Rs1/8/-, or \$2/6 or 40c (international money order). Payment in mint postage stamps of your country accepted.

For the Best in Package Bees and Queens

Write or Contact

Any of the Following Members

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Bowen & Shuman, Williams Calif.
Floyd Fox, Box 492, Fair Oaks Calif.
Foster Apiaries, Colusa Calif.
Gardner Apiaries, Colusa Calif.
C. F. Koehnen & Sons, Glenn Calif.
Herb Light, Box 77, Colusa Calif.
Lohman Bee Co., Rt. 2, Box 644, Loomis, Calif.
A. F. Miller, P. O. Box 54, Williams Calif.
Sam Moore, Rt. 2, Box 620, Anderson Calif.
Homer E. Park, Palo Cedro Calif.
E. H. Ryon & Son, Box 56, Durham Calif.
John S. Shackelford, Rio Oso Calif.
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2-lb. package with queen \$2.75
3-lb. package with queen 3.75
Queens Air Mail, each75

GULF COAST BEE CO.

Schriever, La.

Queens

Package Bees

Queens

Three Banded Italians. Two good races—
Our regular strain and Dadant's Starline Hybrids.
Real honey getters and easy to work with.

Regular Italians		Starlines	
1 to 25	\$1.20	1 to 25	\$1.50
25 to 100	1.10	25 to 100	1.40
100 up	1.00	100 up	1.30

Package Bees—2-lb. with queen, \$3.50

3-lb. with queen, \$4.50

Add 20c to each package for Starline queens with package.
All packages shipped from Graham, North Carolina.

ALAMANCE BEE CO. P.O. Box 485, LaBelle, Fla.

PACKAGE BEES and QUEENS "Italians"



Wilbanks offers you tested stock proven for honey producing ability and easy handling. Satisfied customers through the years assure you of the greatest value here.

— PRICES —

	1-9	10-up	Parcel Post Shipping Wt.
2-lb. pkg. with young laying queen	\$3.25	\$3.00	7 lbs.
3-lb. pkg. with young laying queen	4.25	4.00	8 lbs.
4-lb. pkg. with young laying queen	5.25	5.00	10 lbs.
Extra queens	1.10	1.00	Postpaid

Shipments by Express, Parcel Post or your Truck.

Package Bees F.O.B.—Include Postage for Parcel Post Shipments.

Quality Does Not Cost — It Pays

THE WILBANKS APIARIES

Claxton, Ga.

Starline

SUNKIST

Italians



Reg. U.S. Pat. Off.

With honey in demand, prices favorable, Sunkist packages and queens, you are in a favorable position to make a profit. Our Regular Italian stock has proven itself over the years and is always being improved. Starline Hybrids (the scientific bee), with the astonishing record of checked performance of 38% more honey, 18% more eggs layed, etc., highlights the latest advances in bee breeding. Circulars on request.

We urge you to place your order early for the demand is good and supply limited. Prices, packages with Italian queens:

	Italian Q.	Starline Q.	2-lb. w.q.	3-lb. w.q.
1-24	\$1.20	\$1.50	\$3.50	\$4.40
25-99	1.10	1.40	3.25	4.15
100-up	1.00	1.30	3.00	3.90

Packages with Starline queens add 25c per package.

SUNKIST BEE CO.

Convent, La.

Caucasian or Italian Package Bees and Queens

Bees gentle to work with, less swarming, good producers, health certificate, live arrival guaranteed are just a few things you get when your requirements are sent to me. Prices are:

Quantity	1-25	25-50	50-100
2-lb. pkg. w/q	\$3.00	\$2.90	\$2.85
3-lb. pkg. w/q	3.90	3.80	3.75
4-lb. pkg. w/q	4.85	4.75	4.65
5-lb. pkg. w/q	5.80	5.70	5.50
Queens	1.05	1.00	.95

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Package Bees

Queens



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Is it production you want, also good brood pattern, bees with vigor and gentleness? Dadant Starline Hybrids are scientifically bred for all these factors.

We also offer our regular line of Italian Queens.

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Caucasians

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Combless Packages and Queens.
Three-banded Italians only.

Write for Prices.

REMEMBER—Thirty Bees are guaranteed to please.

W. J. FOREHAND & SONS
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Breeders Since 1892.

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— HONEY WANTED —

CARLOADS AND LESS THAN CARLOADS.
Send samples and quote best cash price delivered to us. All grades.

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Quality Italian

BEES and QUEENS

2-lb. with Queen	\$2.50
3-lb. with Queen	3.50
4-lb. with Queen	4.50
Extra Queens (air mail)	.80

WILKES APIARIES

Box 206 Hamburg, Louisiana

Selected Italian

Package Bees & Queens

Write for Prices

Gene W. Stiles

501 W. 8th St. Davis, Calif.

CROPS and MARKETS

by M. G. Dadant

Moisture Conditions

Apparently throughout Canada from western British Columbia to Quebec moisture conditions are far better than they have been for several years and approach apparently ideal conditions.

Similarly the north central states and extending into New York and the New England states have plenty of moisture. This condition also stretches down into the northern Atlantic Coast region as far as Georgia. Farther south there is fair moisture for the surface but subsoil moisture is badly lacking and streams and lakes have not filled up to even normal conditions.

Montana reports better conditions than formerly and Washington similarly with Idaho and Oregon below normal.

While surface conditions in the Dakotas and extending south through Nebraska, Kansas, Oklahoma and Texas are fairly satisfactory, subsoil conditions are unsatisfactory and there is a tendency towards drought already, particularly in the western sections of these states. This extends into New Mexico, eastern and southern Colorado. Conditions on the west slope and Utah would approach normal providing ample snow comes in the mountain regions. California, no doubt, is better than a year ago.

Condition of Plants

Very generally honey plant conditions are ahead of a year ago. Southern areas apparently had more vetch, more legumes, and northern areas apparently more clover and this condition extends throughout the Canadian Provinces. Intermountain territories are about normal. The west coast we would consider somewhat above normal this year although the early flows, particularly orange, are affected by encroaching suburban conditions and the abandonment of orchards as a consequence. Already early flows in California, Florida, and south Texas are materializing and orange prospects seem to be at least normal if not above. In Florida, however, dry conditions prevail which apparently will have considerable effect upon the Palmetto and other later plants

unless moisture develops as the season progresses.

Bees Wintering

In the northern half of the country we would estimate that condition of bees in wintering is below normal. Many sections have had long protracted spells without a flight and in other sections, bees have suffered from too small clusters owing to a short build-up caused largely by the lack of a fall flow.

Generally, however, we would consider condition of bees about average with probably a heavier demand for package bees owing to the apparent losses in many sections through poor wintering on account of starvation or long confinement.

Feeding

Largely, lack of feed has been caused by failure of fall flows and apparent failure of beekeepers in many instances to make up for the shortage by feeding. All in all, it does look like unless much feeding is done during the spring season there is apt to be much starvation develop in the interim between the early fruit flows and the heavier crop later on.

Condition of Bees

Very few reporters are inclined to predict anything better than good conditions although if there are excellent conditions we would say that they are the rule generally in Canada, the Northeast and through the north central states extending along the Atlantic coast as far south as Georgia.

This year of all years it looks like the development of satisfactory nectar conditions will depend entirely upon the precipitation during the time of the honeyflow to maintain satisfactory moisture in lieu of a shortage of subsoil moisture, other conditions being satisfactory.

On the whole, there are a few reports of poor prospects but there are a larger number of reports that indicate fair conditions, some with expectancy of good to excellent, particularly in the northern areas, as mentioned above.

Honey Wanted—Cars and less than car. Top Prices.
C. W. Aepler Co., Oconomowoc, Wis.

Gray Caucasians

30 Years of Selective Breeding
They are gentle, prolific and excellent honey producers.

Package Bees with Queens
April 5th to June 1st.

1 to 49	2-lb.	3-lb.
50 up	\$3.50	\$4.50
	1.25	1.50

Shipped Via Express Collect or Parcel Post.

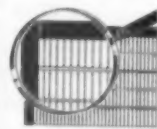
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Bolling, Ala.

Chrysler's Electric Welded All-Steel Queen Excluder



The only worthwhile Queen Excluder on the market

- Accurate spacing
- Allows maximum bee passage
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- More honey production
- No wood. No Burr combs
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- So durably made that it is permanently queen excluding and will last a life time.

We manufacture a full line of Bee Supplies. Order from our dealers or direct from our factory. Canadian-made goods are cheaper. No duty. Send for our price list. Always in the market for Beeswax. Cash or trade.

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Chatham - Ontario - Canada



GET READY FOR THE HONEYFLOW with Tennessee Italian Queens.
John Davis Italian Queens — Ea. \$1.25, any number. Queens Available after April 15

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2-lb. pkg. with queen	\$2.80
3-lb. pkg. with queen	3.40
4-lb. pkg. with queen	4.15
5-lb. pkg. with queen	4.95

Extra Queens, 55c each.

Live delivery guaranteed and health certificate with each shipment. 10% books your order. Balance 10 days before shipment.

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BEES QUEENS

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KELLEY—"The Bee Man" Three-banded Italian bees and KELLEYS ISLAND improved hybrid queens direct from our own bee farm. Shipments start April 1st—express or parcel post shipment. Thousands of extra queens.

	Queens	2-lb. W.Q.	3-lb. W.Q.
1-24	\$1.10	\$3.50	\$4.50
25-99	1.00	3.25	4.25
100	.95	3.00	4.00

(Last month our advertisement got mixed up—these are our actual selling prices—they are net—no discounts.)

WALTER T. KELLEY CO., Clarkson, Kentucky

This Year Will Be the Big Year

Beekeepers—Check your supplies and stock up now so you can assemble them during the slack winter months and you will not be caught short when the honeyflow comes.

Stop in and look over our stock of Lewis-Dadant bee supplies and equipment.

Florida Honey Co-Operative, Inc.

Umatilla, Florida

YELLOW ITALIAN BEES AND QUEENS

2-lbs. bees with queen	\$2.75	4-lbs. Bees with Queen, \$4.75. Queens,	
3-lbs. bees with queen	3.75	\$50 each. For air mail shipments add	
		50¢ per queen.	

We guarantee live arrival and health certificate with each shipment.

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Live delivery guaranteed on all shipments. 10% deposit books any order.	2-lb. pkg. with queen	\$2.75
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Special Prices to Those Who Truck.

Write for discount on orders over 25 packages.

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PACKAGE BEES AND QUEENS

By Express or Parcel Post. Extensive experience in loading out trucks.

	1 pkg.	5 or more
2-lb. bees with young queen	\$3.25 each	\$3.00 each
3-lb. bees with young queen	4.25 each	4.00 each

Nearing a half century in the same place, same business, under the same name, is my record. My motto: I expect to do business with you again.

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PACKAGE BEES FOR 1955

Truck loads a specialty. Nuclei made to order. Caucasian and Italian queens.

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Write for 1955 Catalog

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1955

Packages and Queens

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2-lb. & queen	\$2.75
3-lb. & queen	3.50

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Bright Three-Banded Italians

Queens, 1 to 50, \$1.00 each; 50 up, 90¢
2-lb. pkg. w/q, 1 to 50, \$3.25; 50 up \$3
3-lb. pkg. w/q, 1 to 50, \$4.25; 50 up, \$4

We guarantee safe arrival.

TAYLOR APIARIES

Box 249, Luverne, Ala.

- B. WAXMASTER Electric Capping
Melter
- L. HANDY Hive Lifters
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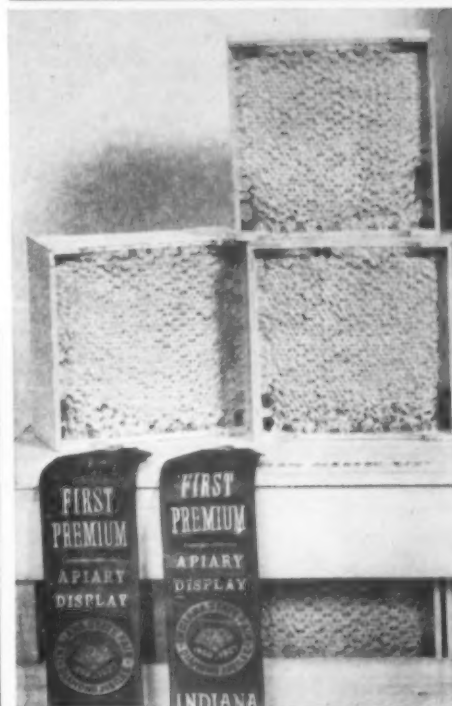
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Dadant's Thin Super Foundation

For Section Comb Honey

Dadant's Thin Super Foundation is so thin and clear you can see through it. It will give you quality section comb honey. The biting quality at the base of the honey is such that the wax crumbles under the tongue; delicate, tasty, downright good. That is the quality you get from Dadant's Thin Super Foundation and customers always come back for more. If you want the kind of section comb honey shown in premium displays you can get it with Dadant's Thin Super Foundation.

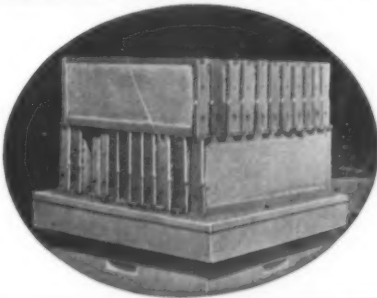


Dadant's Crimp-Wired Foundation

Dadant's Crimp-Wired Foundation makes everlasting combs. Each crimp in each wire exerts a steady pull to keep the pure beeswax sheet in exact center. The wires are specially shaped and embedded for the exact needs of perfect combs. They are of special steel so they do not bend out of shape and the hooks hold any weight the combs can put on them.

Dadant's Gilt-Edge Foundation

Wired with both vertical and cross wires and bound with golden metal edges. No wiring to do. In Lewis Nailless Topbar Frame, Gilt Edge assemblies in less than a minute. Send 25c for sample frame and foundation (Gilt-4-Edge for Lewis frame; Gilt-3-Edge for any wedge topbar frame with slotted or grooved bottombar.)



For Cut Comb Honey

More and more, the honey markets want honey, cut from the combs and put up in cellophane wrappers in cartons, or packed in glass with liquid honey. For this purpose you must have shallow super combs with honey having a fine finish, with even surface, free from travel stain or disfiguration. When packed the honey must be so attractive that the customer will just want to buy. Either Dadant's Thin Surplus or Cut Comb Foundation will produce just the kind of honey you want for this purpose.

Are You Losing Beeswax?

We render old combs, cappings, and slumgum for beekeepers. Our steam wax presses get every available ounce of wax out of this material.

If you are rendering your own or having this work done elsewhere, give us a chance to show you what we can do. We specialize on SLUMGUM from presses that are not operated under water. We often get from 10 to 40 per cent wax from such material.

Send for terms. Ship us your Beeswax. Prices are high.

Dadant's Plain Foundation

Without wires for those who have their own way of assembling and wiring foundation. The cells are sharp and clear cut with strong side walls and good, solid bases. This foundation has been made by Dadants for over seventy-five years. Each sheet is inspected so you get only perfect ones, in tissue packed, tight fitting cartons.

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Hamilton, Illinois

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Time may prove this to be far superior to any bottom board on the market today. It's somewhat flexible and may spring out of shape when not in use. But, like good spring steel, it's rough, rugged, and ready when on the job. Our years of testing have proved these facts:

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